A DEVELOPMENTAL STUDY OF THE BEHAVIOR PROBLEMS OF NORMAL CHILDREN BETWEEN TWENTY-ONE MONTHS AND FOURTEEN YEARS

BY

JEAN W. MACFARLANE, LUCILE ALLEN,
AND MARJORIE P. HONZIK

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The statistical analyses of some thirty behavior patterns for more than one hundred children, collected at yearly intervals for a period of 14 years, yields a sizable crop of data which involves a heroic amount of clerical and statistical work. We can mention only a few of the many who have lent a hand in summarizing and collating the findings: Herbert S. Conrad who served as a statistical consultant and who analyzed the findings for the early preschool years, Read D. Tuddenham who outlined the tabulation procedures, and the following statisticians who gave valued assistance in tabulating and computing the various statistics: Jack Delaney, Donald and Elizabeth Macleod, Hans H. Hoffman, Lee Cohen, Britomar Handlon, Philip Deuel, and more recently and especially, Karyl R. Atherton. Katherine Eardley, scientific illustrator, prepared the many figures, often more clear in their communication than our many words. We also wish to express our indebtedness to Margaret J. Heick who gave unstintingly of herself during the final throes of typing and assembling the manuscript, and to Betty L. Kalis and Edith S. Katten who helped in the final proofreading of the report.

Mention should be made of the responsibilities of the three authors. The Guidance Study is under the direction of Jean W. Macfarlane who is responsible for the data sought and the writing of the sections on specific problems. Lucile Allen not only collected nearly all the behavioral data but also wrote the descriptions of the frequency figures, the chapter on the position in the family, and case history materials. The data analysis has been largely supervised by Marjorie P. Honzik who is also responsible for certain of the summarizing chapters.

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Jean Walker Macfarlane
Lucile Allen
Marjorie P. Honzik

February, 1954

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I. INTRODUCTION

THIS MONOGRAPH presents by age and by sex the frequencies of certain behaviors, as reported by mothers, of a cross-section sample of children followed over a long time span. Much has been published on the frequencies of the various "problems" that children present to child-guidance clinics where they have been referred by concerned parents, teachers, physicians, nurses, courts, and others. Little has been published on how frequent are the same problems in a cross-section sample or normal run-of-the-mill group. It seems useful, therefore, to present these findings on children not selected on a problem-presenting basis but selected serially from a birth certificate registry, to obtain as representative a sample as possible.

These data are from a larger study (5, 7) whose purposes were to discover the facts of physical, mental, and personality growth; to find the kinds and frequencies of problems that children have during the growth period and the factors associated with these problems; and to discover, if possible, the critical differentials whereby some individuals develop mature and sturdy personalities, whereas others rigidly or neurotically cling to immature or ineffectual patterns or disintegratingly revert to them. We believed that such critical differentials would be established only by comparing life histories of the successful and unsuccessful; we have a tremendous literature about the latter; we have little systematic information about the former. This larger study followed two subgroups; one was called the "Guidance Group" which had intensive discussion of marital, parent-child relations, child-training procedures, and so on, and thus became a modified group. The second group, called the "Control Group" did not have this type of intervention and discussion. This report is based upon the data from the Control Group, selected as being less modified and therefore more representative of a normal population of families. (We have evidence that the Guidance Group was modified, for example, to mention one index only, one-fourth as many Guidance parents were divorced as was true in the Control Group.)

The main emphasis of this publication will not be on the dynamics of problem behavior but rather on the end products of those dynamics—namely, frequency figures of behaviors by age and sex. However, some material will be presented on interrelations among problems and certain associated factors.

FACTORS AFFECTING PROBLEM FREQUENCY FIGURES

The frequencies of problems reported from any study are influenced by a number of factors which should be borne in mind in evaluating such reports, this one included. In view of the fact that overgeneralization runs rampant in the literature because of inadequate attention to these factors, it appears important to enumerate and discuss briefly the more important ones.

NATURE OF THE SAMPLE

It is obvious that an agency which gets its referrals through medical sources will be heavily weighted with frequencies of problems associated with biological functions, for example, eating problems, elimination problems, and psychosomatic problems. Where the referrals come largely from social agencies devoted to law and order, for example, Juvenile Courts, the problem frequencies will be high in behaviors involving violations of persons and property. Where the referrals are heavily loaded with children from schools, the problem frequencies will be high in behaviors that disturb classroom convenience and routine such as disobedience and lack of orderliness.

Frequencies will vary depending upon the homogeneity or heterogeneity of the sample with respect to economic and class levels and cultural groups. These determine in part the nature of the stress situations with which the child must cope, as well as what coping behavior is permitted overt expression and what must be internalized. Age, stage of biological maturity, sex, family training procedures, birth order, constitution, and health likewise influence sample characteristics and, therefore, reported problem frequency.

We shall be as explicit as possible in describing our sample.

DIFFERENCES IN DEFINITIONS OF PROBLEM BEHAVIOR

It is obvious that what is listed as a problem will depend largely upon how explicit and definitive are the classificatory categories with respect to the kinds of behavior subsumed under such categories as tempers, lying, shyness, and the like. It is of interest to note that at the time this study began in 1929, there were countless publications on problem frequencies, but there was only one explicit definition of problem behavior in the entire literature, namely, sibling jealousy. Each investigator was using his own private semantic stereotypes for classifying behavior. One of our first tasks, if we were to compare year-by-year changes in behavior patterns, was to develop a more stable and explicit set of classificatory categories. To this end, continua of behavior descriptions were evolved which permitted us to locate a given child's behavior at a given time. These continua included kinds, frequency of occurrence, and intensity descriptions. More difficult to evolve than the scales of description of simple patterns of overt behavior were the more complex yet useful molar categories such as anxiety. When scales had been evolved, we had to select arbitarily cutoff points beyond which behavior was regarded as falling into the problem category. (Chapter ii contains the classificatory scales and indicates the cutoff points used.)

DIFFERENCES IN METHODS OF COLLECTION OF BEHAVIOR DATA

Reported frequencies of behavior depend also upon (a) *what information is sought;* (b) *who is seeking the information;* (c) *from whom it is sought;* and (d) *by what methods.*

(a) What is sought is that which is regarded as important by the person seeking it. We had to guide and to mislead us at the beginning of the study the published literature—theoretical, experimental, and clinical, and our convictions growing from experience with both disturbed children and adults and with well children and their parents. In general, we attempted systematic and wide sampling of behavior including those facts traditionally sought in social, medical, and child-guidance histories. We had available the findings from such studies as Wickman (11) and Stogdill (9), which showed that, although there was high agreement among teachers, among parents, and between teachers and parents about what was significant behavior in children, there was a correlation of zero (–.08) between the judgments of teachers and mental hygienists. Therefore, we tried to tap behavior that, from these different frames of reference, was judged to be significant.

(b) The personality, professional skills, experience, and attitudes of the person or persons who secure information, even after a systematic topical framework is laid out, have an influence upon the giving or withholding of material by the informant which, of course, affects frequency figures. These data are affected to unknown degrees if different workers with their respective configurations of personality, skill, experience, and attitudes obtain pooled data. We have information from another sample which shows that statistically reliable differences occur on several problem frequencies obtained by different workers using the same topical outline and interviewing the same parents and children. Fortunately, the data for this report were secured in large part by the same worker[1] throughout the age span studied.

(c) The informant's perceptiveness and withholding or editing of information also influences frequency figures. The data herein reported are from mothers. It is conceivable and even probable that somewhat different frequencies would have been obtained had we secured data from the fathers. Further, the data may have a systematic error in reported frequencies for girls and for boys. It is possible that a mother may have a higher expectancy of "good" behavior from her daughter and thereby be more critical of certain of her lapses from expectancy. It is possible, too, that energetic aggressive male behavior may be irritating and freely reported. Similarly, fathers might be more critical of certain of their sons' behavior and more accepting of aggressive behavior. All we can say is that the frequencies presented in this paper are colored by the mothers' perceptions and reports but probably represent a fairly true picture of the mother-child relationship, an important part of the atmosphere in which the child develops his patterns.

(d) The methods used also determine frequency figures. Long intensive interviews yield more information than short surface ones. Since our objective was to keep the Control Group as much of a control as possible, the method used was in terms of an inventory of behaviors. The formulation to the mothers of the reason for obtaining these data was in terms of discovering how a normal cross section of youngsters actually behaved at different ages during their period of growth. It was made clear to them, so that they would not expect discussion on problems and child-training procedures, that our function was purely fact finding. This method did not give us as full data as the more intensive one but it did two things: it left the Control Group uncontaminated, and it gave data which represented behavior as the mothers observed and reported it. And further, if it can be demonstrated that significant findings can be secured without the intensive beneath-the-surface type of method and by a more or less surface inventory of easily observed behaviors as reported by mothers, a rich source of data will be available to future research.

---

[1] Lucile Allen, one of the authors. She had had training in home economics, child development, and clinical psychology, long experience as a lecturer to parents in rural communities and as a nursery school teacher, and a long experience with normal children and their parents. Her personality, of which a characterization follows, obviously has bearing on the fact that without intervention and advice, to the end that this group be kept as a control for our intensive group, she was able to keep so many of them coming in over a long period of time. To quote one colleague who was asked to describe her, "she is a woman of great serenity, social grace, and great strength who combines friendliness with objectivity. Singularly free to see people as they are, to accept them as they are, and to communicate to them her acceptance of them as they are, she makes irrelevant the usual interpersonal defenses." To quote another, "I have never known anyone who had such a pervasive friendly interest in people; who seemingly has no need whatever to either project or introject. She leaves people free and unconfused. She never mixes up her own personality and her needs with theirs." [Prepared by Jean Walker Macfarlane. When L.A. saw this footnote in galley proof, she stated, "I hope the rest of the monograph is more accurate."]

We have some information about the effects upon frequencies of different methods of obtaining data. A comparison of the control frequency figures at 21 months with those for the intensively interviewed group (Guidance) before such intervention had occurred shows significantly higher frequencies of certain problems for the inventoried control group. In the intensive group, the interviewers obtained much more detailed information about each behavior pattern and so were able, upon the basis of greater information to dichotomize more adequately into problem and nonproblem categories. The following ten out of twenty-eight patterns were higher for the control at 21 months (see table 1) at the 1 per cent level: *restless sleep, overactivity, oversensitiveness, disturbing dreams, speech problems, irritability,* and *jealousy;* at the 5 per cent level: *stealing, physical timidity,* and *mood swings.* The differences occurred largely in personality characteristics but not in such easily observed behaviors as *eating* and *elimination habits,* and in such overt behaviors as *thumbsucking, nailbiting, tics and mannerisms.*

On the other hand, the correlations between the frequency figures for the two groups are high ($r = .92$ for the girls and .91 for the boys), which means that the problems high in frequency in one group were high in frequency in the other and those low in one group were low in the other.

It is clear from this that the figures presented in this paper, representing as they do mothers' immediate and more superficial and unedited reports, are higher in certain respects than the more intensively interviewed group but do give an adequate picture of the mothers' observations of and opinions about behavior and characteristics shown by their children.

THE SAMPLE

The children included in the present study are members of the University of California Guidance Study sample of 252 children whose physical, mental, and personality development has been observed from birth to maturity. The Guidance Study sample and program of data collecting have been described in a number of previous

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TABLE 1

COMPARISON OF PROBLEM INCIDENCE IN THE GUIDANCE AND CONTROL GROUPS AT 21 MONTHS

(in per cent)

Behavior problems	Boys		Girls		Total		Difference significant at confidence level P
	Guidance	Control	Guidance	Control	Guidance	Control	
Sleeping habits							
Disturbing dreams	5	16	0	13	2	15	.01
Restlessness in sleep	13	38	12	27	12	32	.001
Elimination							
Diurnal enuresis	55	62	38	43	47	53	
Nocturnal enuresis	71	75	60	73	66	74	
Soiling	29	31	17	21	23	26	
Eating							
Insufficient appetite	11	7	10	10	11	9	
Food finickiness	32	30	24	37	28	34	
Sex							
Excessive modesty	3	0	0	5	2	3	
Exhibitionism	0	0	0	0	0	0	
Masturbation	8	9	0	8	4	9	
Motor habits							
Tics and mannerisms	2	0	3	3	2	2	
Nailbiting	6	5	5	3	6	4	
Thumbsucking	18	21	40	33	28	28	
Overactivity	8	29	5	17	7	22	.001
Speech problems	19	30	2	17	11	23	.01
Social standards							
Lying	0	0	2	0	1	0	
Stealing	0	7	0	3	0	5	.05
Destructiveness	10	14	3	2	7	8	
Personality characteristics							
Excessive emotional dependence	14	21	16	8	15	15	
Excessive demanding of attention	19	20	14	27	17	23	
Oversensitiveness	0	9	2	18	1	14	.001
Physical timidity	16	23	10	25	13	24	.05
Specific fears	18	30	26	33	22	32	
Mood swings	0	9	5	8	2	9	.05
Negativism	19	18	17	18	18	18	
Irritability	3	16	0	3	2	9	.01
Temper tantrums	44	59	45	43	44	51	
Jealousy	8	30	17	20	12	25	.01
Number of cases	62	60	58	56	120	116	

publications (5, 6, 7). However, it should be mentioned here that this group of children constitutes a representative sample of the Berkeley Survey which, in turn, includes every third child born in Berkeley between January 1, 1928, and June 30, 1929. Berkeley is an urban community in which there is a state university. The parents of these children had more formal education than the population average at the time this sample was selected, but the average income of these young parents was below the United States average when the children were born (5).

The children's first visit to the Institute of Child Welfare for a physical examination and mental test occurred at the age of 21 months. By this age level, the group of 252 had been divided into two matched subsamples of 126 children on the basis of the following socioeconomic factors:[2]

Parents' national derivation
Income
Father's occupation
Socioeconomic rating
Neighborhood
Mother's age
Mother's education

Both groups of 126 children, Guidance and Control, were given physical examinations and mental tests at regular intervals. The present report is based on data from the Control Group only.

A major difficulty in longitudinal studies is the diminution in the size of the sample as families move from the area or lose interest in the study. The data of this Control Group were especially susceptible to the problems of sample shrinkage because the mothers were interviewed only when they brought their children in for tests, and as the children grew older, the mothers were less likely to accompany their children and, therefore, the mothers' reports were not obtained. The mothers of 116 children were interviewed when their children were aged 21 months. At the 5-year level, reports were scored for 91 children, at 10 years for 61, at 13 years for 58, but at 14 years, only 41 mothers came in. At this 14-year level, 86 of the children came in, which means that for more than half of the available group, no report was secured from the mother.

The question immediately arises as to the selective factors over time which may be operative in sample shrinkage. In table 2, the distribution of Warner's Ratings of Social Class Status for families of children for whom there are Behavior Records at 21 months is compared with those for whom there are records at 5 years, 10 years, 13, and 14 years.

---

[2] The socioeconomic appraisal was made for each family by a socioeconomist who visited the home approximately one month after the child's birth (5).

It will be observed that a larger proportion of Upper-Middle-Class mothers continued to come in whereas proportionately fewer of the Lower-Class parents came in with their children. There are a number of reasons for this selective tendency. A larger proportion of Middle-Class parents encouraged their children to continue in the Study, either because they valued the information received on the child's physical and mental growth, or because they thought that it was "the right thing to do" to continue a research study sponsored by the University. In addition, and more important in relation to the small proportion of mothers who came in with their children for the 14-year examinations, is the factor of economic necessity. More of the Lower Class mothers worked and could not accompany their children, and more of their teen-aged children were earning needed money after school. It is also true in Berkeley that the Upper-Middle-Class families live in the hill areas and the children often depended on their families for transportation home after school hours.

TABLE 2

CHANGING DISTRIBUTIONS OF THE SAMPLE OVER TIME IN SOCIAL CLASS STATUS

Parents' social status at child's birth[a]	1¾ years		5 years		10 years		14 years	
	N	Per cent	N	Per cent	N	Per cent	N	Per cent
Upper class	..	....	..	....	..	....	..	....
Upper-middle class	16	14.0	17	18.7	14	23.0	10	24.4
Lower-middle class	51	44.0	37	40.7	28	45.9	19	46.3
Upper-lower class	44	38.0	33	36.3	18	29.5	12	29.3
Lower-lower class	5	4.0	4	4.4	1	1.6	..	....
Totals	116	100.0	91	100.1	61	100.0	41	100.0

[a] Warner classification.

The effect upon the frequency figures of the gradual decrease in the original sample must be inspected to see to what extent the children who continued in the study constitute, at the different age levels, representative subsamples of the total group with respect to the behaviors studied. One method of avoiding possible biased subsampling would have been to use a core group (same children at each age level). But, in a long, over time study, this would have meant throwing out a great many records. Additionally, the core sample would not only be less representative of the urban community from which it is drawn, but the small number of cases would have greatly reduced the opportunity of obtaining significant relationships with other characteristics of the children and their parents. All the records obtained have been included in every statistic. We believe this is justified since the sample shrinkage was related to socioeconomic status, which in turn was found to be negligibly related to problem behavior for children in the Guidance Group (5), and consideration of the frequency figures for a "core" as compared with the "total" group showed them to be sufficiently comparable to justify the use of the total group. For example, in one of the more important behaviors (in terms of number of significant behavioral correlates), namely, *excessive emotional dependence*, marked changes in frequency occurred at different age periods. Rank order correlations for this problem between the frequency figures at the thirteen age periods for the core versus the total group produced Rhos of .82 for boys and of .69 for girls.

PROGRAM OF DATA COLLECTION

The program of data collection for the children in the Control Group included visits by a public health nurse during the first two years, followed by an invitation to the mother to bring her child in for a physical examination and mental test when he was aged 21 months. Transportation by car was offered in the invitation.

On arrival at the Institute, the mental tester greeted the mother and child and suggested to the child that there were some games to be played. After the mental test, the examiner asked the mother about the child's habits, regime, and certain behavior characteristics. At the 21-month level, the behavior inventory was taken while the youngster was still in the testing room, but at later ages the child accompanied a staff member to the examination room while the mother remained to answer questions.

The questions asked were selected from a much larger inventory which was used for the Guidance Group. The behavior items selected for this Control Group were those which were easily observed by the mother and reportable without intensive interviewing. They are listed on the recording form found on pages 64–65, and the descriptions assigned to each of the five points of the coding scale are reported in chapter ii. These codings are so-called because they are descriptive categories, and the codings for many items, unlike ratings, are not necessarily normally distributed.

It will be seen in the code list (pages 14–62 of chapter ii that certain code numbers are placed in brackets. These brackets indicate that the described behavior is, for the purposes of this study, considered "problem behavior." Thus, if a child is assigned a coding of (1), (2), or (3) on *disturbing dreams,* he is tabulated as presenting this particular problem. For some behaviors, two code descriptions are considered as problems; for others such as *nailbiting* and *thumbsucking,* four of the five code descriptions are considered problems and only the coding (5) *never bites nails* or *never sucks thumb* are *not* considered problems. These two items are also good examples of behaviors which are not normally distributed since more than half of the children do not have these problems and, therefore, are given codings of (5). Some behaviors have problem categories at both ends of the scale. For example, codings (1) and (2) of the item, *selfishness in sharing,* are problem ratings and refer to "strong resentment against sharing" and "sharing only under pressure," respectively. Also, (5) "wants to give all his things away; excessive generosity," is considered a problem. Much of the analysis in this monograph will be based on comparisons of children who have a certain problem versus those who do not. In fact, our primary purpose is to present the proportion of normal children who have these specified behaviors at successive ages during childhood.

These records were collected in large measure by one investigator. Sixty-five of the 116 mental tests and behavior inventories at the 21-month level were obtained by L. A. And from 3 to 14 years, she did almost all the testing and interviewing. Thus, of the total 1,076 behavior inventories obtained, 940 were secured by L. A. and 136 by other workers.

CONTENT OF THIS REPORT

Chapter ii will contain the basic data on which later analyses and discussions are based. It will include the definitions and codes for the behavior studied, the graphed distributions at the various code points, the behaviors tabulated as problems, and finally, the percentage frequencies by age and sex and by first-born and non-first-born.

Chapters iii through vi will present the materials by problems with discussion of age trends, sex differences, birth-order differences, relationship to other problems and, where possible, persistency indices and relationships to health, I.Q., and certain parental characteristics.

Chapters vii through xiv will pull together summary statements on age trends, sex differences, birth-order differences, persistence, interrelationships among problems, and relationships of problems to I.Q., health, and personality characteristics in the mother.

Chapter xv will summarize the major findings of the study and some of their implications.

II. BEHAVIORS INVESTIGATED, CODES OF CLASSIFICATION, DISTRIBUTIONS OF BEHAVIORS ACCORDING TO CODES, AND FREQUENCIES

THIS CHAPTER lists the behaviors systematically inventoried and presents descriptions of terms evolved in codes or scales into which behaviors could be classified. It also includes the distributions according to the steps in the code and the points which were arbitrarily selected as cutoff points beyond which data were tabulated as problems. Finally, this chapter contains the frequency figures in tabular form by age and sex (table 3), and by age, sex, and whether first- or non-first-born (table 4).

A few comments should be made about the processes by which the codes were established. After an outline of topics or aspects of behaviors were settled upon, two steps were taken which varied in our two groups since for one, the original Control Group, simple inventories by topic were made. In the other group, intensive interviews were undertaken to obtain as much relevant material as possible on each topic. After three age levels (21 months, 3, 3½ years) of such interviews, tentative codes of descriptive continua were set up which would subsume the degrees and intensities and frequencies of each behavioral topic investigated. These codes were used on the intensive group and modified, and behavior reclassified to fit the modifications over three more age periods (half-yearly), until the codes appeared adequate for classifying obtained descriptions of behaviors. For the group reported in this study (controls of the original study) the data secured from the mothers' reports beginning at age 5 were classified according to the code developed from the intensively interviewed group. The codes, by no means perfect instruments, at least were empirically derived and, therefore, did not distort or force data into nonrealistic categories. They offered the possibility of pinning down interview materials quantitatively and of comparing behaviors year by year. Additionally, the codes forced more systematic questioning to the end that enough data be obtained to permit coding than did the previously used dichotomizing on the basis of the presence or the absence of a problem. Inspections of age trends indicate that the change from dichotomizing at age 4 to coding at age 5 did not disturb findings. That is, practically no problem frequency went up or down at age 5 unless part of a trend.

Unlike ratings, these empirical codes did not show normal distributions, and distributions change with age.

Behavior was dichotomized into problem and nonproblem until descriptive codes were developed. For most problems, the coded distributions were available from 5 years on. Several behaviors were not systematically sought until 7 or 8 years, when these behaviors became so obvious with age that they were added to the systematic inventory.

Since frequency figures are obtained from interview material at, or near, the birth date, they refer to behavior occurring at, or immediately preceding, that birth date. For example, age 5 data are data at the end of the fifth year and are *not* data relating to the age when a child is called 5, namely, between his fifth and sixth birthdays.

LIST OF BEHAVIORS INVESTIGATED[3]

Problems Associated with Biological Functioning and Control
- 1. Disturbing dreams
- 2. Restlessness in sleep
- 3. Diurnal enuresis
- 4. Nocturnal enuresis
- 5. Soiling
- 7. Insufficient appetite
- 9. Food finickiness
- 11. Excessive modesty
- 12. Exhibitionism
- 13. Masturbation
- 14. Unusual sex interest

Problems Associated with Motor Manifestations
- 15. Tics and mannerisms
- 18. Nailbiting
- 19. Thumbsucking
- 20. Overactivity
- 21. Speech problems

Problems Associated with Social Standards
- 22. Lying
- 22a. Truancy from home
- 22b. Truancy from school
- 23. Stealing
- 24. Destructiveness

Problems Associated with Personality Patterns
- 26. Selfishness in sharing
- 27. Quarrelsomeness
- 28. Excessive emotional dependence
- 29. Excessive demanding of attention
- 35. Oversensitiveness

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[3] Listing is made on the basis of the problem end of behavior continua.

36. Physical timidity
36b. Shyness
37. Specific fears
38. Mood swings
38a. Somberness
40. Negativism
41. Irritability
42. Temper tantrums
43. Jealousy
44. Excessive competitiveness
45. Excessive reserve
46. Unself-reliance

BEHAVIOR AND PERSONALITY PATTERN CODINGS[4]

A. *Habits Relating to Sleep*

#1. *Dreams.* Presence of dreams is indicated by a combination of the child's or mother's report of dreams, or by occurrence of talking or crying out in sleep. If both mother and child report "no dreams" but if the child is tense while denying dreams, record as unascertained with a question mark followed by interviewer's judgment of intensity of affect (1, 2, or 3).[5]

(1) Unpleasant or disturbing dreams approximately every night, or nightmares once a month or oftener. Nightmare—screaming out in a panic, unable to go back to sleep. Child reports he hates to go to sleep at night because of the terrible things he dreams.

(2) Unpleasant or disturbing dreams once, twice, or three times a week or nightmares once every two months. Child reports that he dislikes dreaming. Tries to think of pleasant things before he goes to sleep so he won't have unpleasant dreams. Shows some affect when repeating dreams but not so acute as (1).

(3) Pleasant dreams oftener than twice a week; or unpleasant or disturbing dreams twice a month, but not acute enough to wake him up. One nightmare (as defined above) in six months. Prefers not to dream. Mild tension shown while discussing dreams.

4 Pleasant dreams once a week or less; unpleasant or disturbing dreams once a month or less. Generally "sort of fun" to dream. To questioning shows no affect, either pleasant or unpleasant.

5 No record or evidence of dreams. Child doesn't recall any. If child vigorously denies having dreams but seems tense while denying them, do not record as 5 but as unascertained.

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[4] Since this code was used for both Guidance and Control groups, the references to children's comments are not relevant.

Certain behaviors (*insufficient appetite, excessive modesty, overactivity, destructiveness, selfishness in sharing, quarrelsomeness, excessive emotional dependence, oversensitiveness, physical timidity, negativism, excessive competitiveness* and *excessive reserve*) have problem codings at both ends of the 5-point scale. However, so few cases were given codings of (5) (the reverse of the above mentioned behaviors), that they have been omitted from our summaries of problem incidence (tables 3 and 4), and they have not been included in our discussions. For example, "insufficient appetite" and not the other end of the scale "voracious appetite," was tabulated although both ends of the scale are included in the figures showing the distributions of codings.

[5] Numbers in parentheses indicate those descriptions coded as problems.

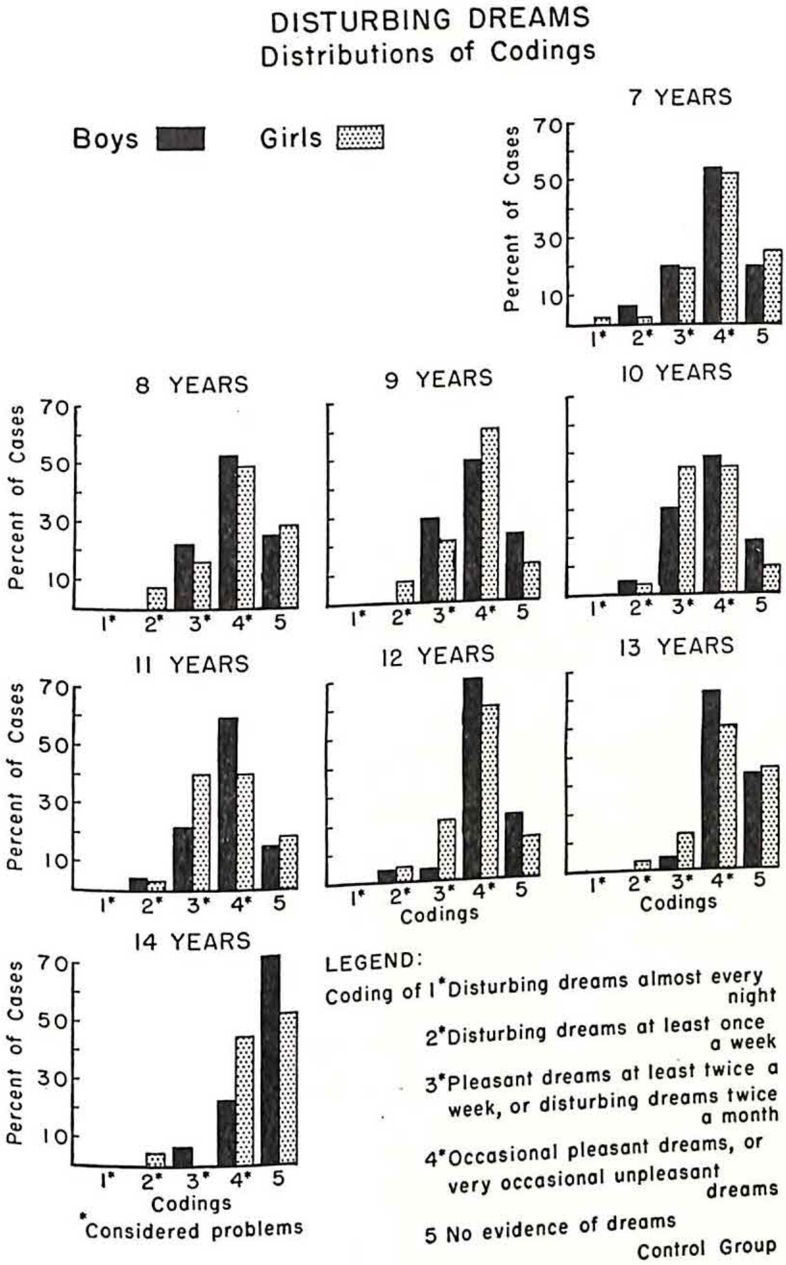

DISTURBING DREAMS
Distributions of Codings
Boys ■
Girls ▨
7 YEARS
8 YEARS
9 YEARS
10 YEARS
11 YEARS
12 YEARS
13 YEARS
14 YEARS
Percent of Cases
70
50
30
10
1* 2* 3* 4* 5
Codings
*Considered problems
LEGEND:
Coding of 1* Disturbing dreams almost every night
2* Disturbing dreams at least once a week
3* Pleasant dreams at least twice a week, or disturbing dreams twice a month
4* Occasional pleasant dreams, or very occasional unpleasant dreams
5 No evidence of dreams
Control Group

Fig. 1

#2. *Restlessness in sleep.* Depend mainly on mother's statement. Lying awake long not included. Indicated by twisting and turning, kicking off covers, falling out of bed, and so on (restlessness due to temporary illness excluded; restlessness due to chronic condition included—for example, hives, eczema, etc.).

(1) Covers chronically kicked off every night; evidence of much tossing and turning. Falls out of bed oftener than once in six months (when bed facilities are adequate). Wakes up once or twice a night. Very light sleeper. Wakes at slight noises, change of illumination, etc. Grinds teeth, moans, etc., habitually or at least two or three times a week (snoring excluded). Sleepwalking two times in six months (confusion when going from lavatory at night not included as sleepwalking).

(2) Restless two to four times a week—or less severe than (1). Falls out of bed once in six months. May walk in sleep one time in six months. Grinds teeth once a week or less. Restless nightly or nearly so, even if apparent cause is too much food or fluid, too many covers, etc.

3 Occasional disturbance of covers (one time a week). After exciting play, when weather is warm, too many covers, when he has to sleep with restless bedfellow, unusual noises, etc.

4 One time a month is restless whether cause is unknown or appears related to physical or psychological factors.

5 Covers practically undisturbed; no evidence of restless sleep. Unusually quiet, sound sleeper.

B. *Elimination*

#3, 4. *Diurnal and nocturnal enuresis.*

(1) An average of two or more episodes a week.

(2) An average of two to four episodes a month, involving real loss of sphincter control. Damp twice a week or more.

(3) An average of one episode per month when evidence of tension. Damp two or less times a week but no real loss of sphincter control.

(4) One episode in last six months.

5 Completely absent in last six months.

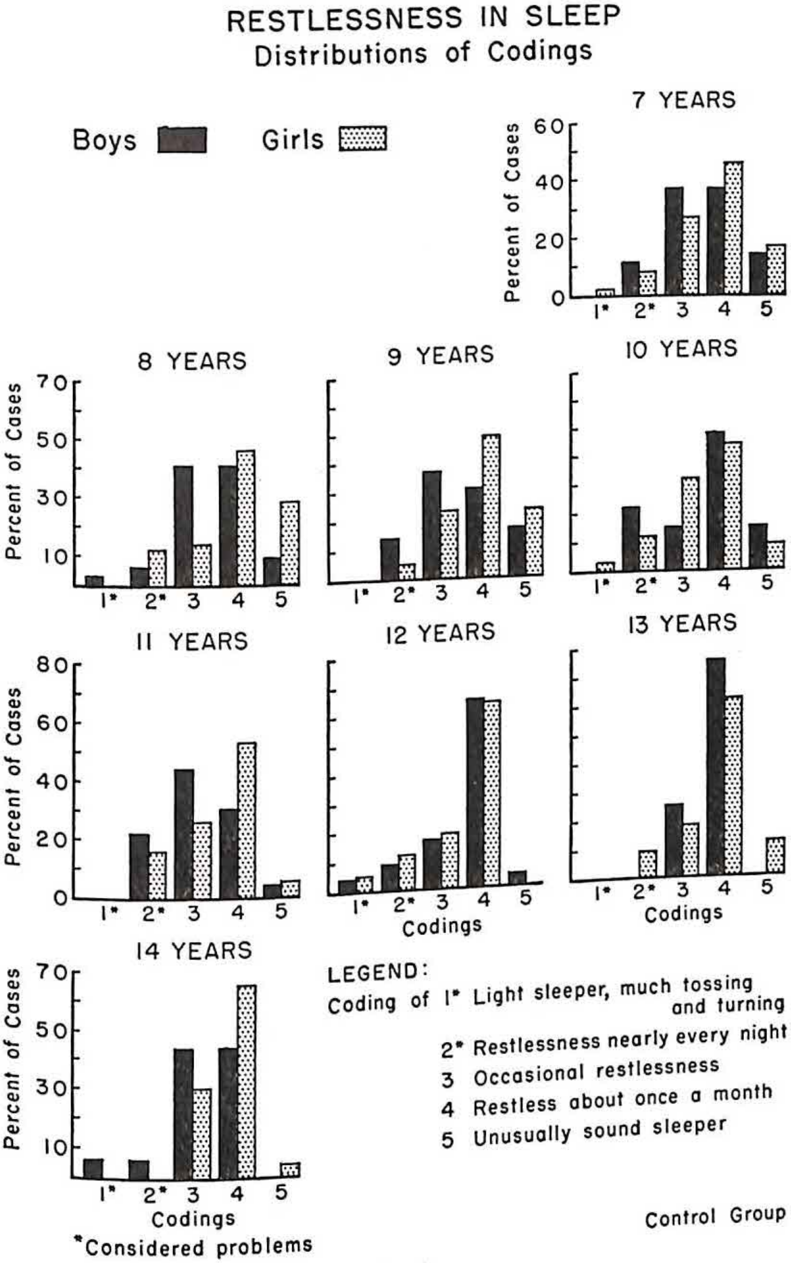

RESTLESSNESS IN SLEEP
Distributions of Codings
Boys
Girls
7 YEARS
8 YEARS
9 YEARS
10 YEARS
11 YEARS
12 YEARS
13 YEARS
14 YEARS
Percent of Cases
0
10
20
30
40
50
60
70
80
1* 2* 3 4 5
Codings
LEGEND:
Coding of 1* Light sleeper, much tossing and turning
2* Restlessness nearly every night
3 Occasional restlessness
4 Restless about once a month
5 Unusually sound sleeper
Control Group
*Considered problems

Fig. 2

C. *Habits Relating to Food*

#7. *Appetite* (insufficient or excessive). Based on total food intake, not merely mother's worry that child doesn't eat enough; plus child's statement; plus report from physician on weight for height and age and his rating of nutrition.

(1) Markedly inadequate appetite, never really hungry. Eating very unpleasant chore. Child reports he "hates" to eat and mother verifies it. Satisfied with unusually small amounts.

(2) Below average—not interested, eating a bore. Variable or generally below average. Less severe than (1). Never asks for food between meals. Also included in this group are children who are not hungry at meals because candy is eaten between meals.

3 Average—normal amount. Takes eating for granted. Usually hungry at meal times. This includes child who gets hungry four or five times a day and eats small amounts at any one time but who has a normal total intake. Occasionally asks for fruit between meals.

4 Above average—enthusiastic about eating. Daily gets hungry and asks for food between meals.

(5) Voracious eater—never satisfied; eats markedly more than average child. Greediness past point of hunger.

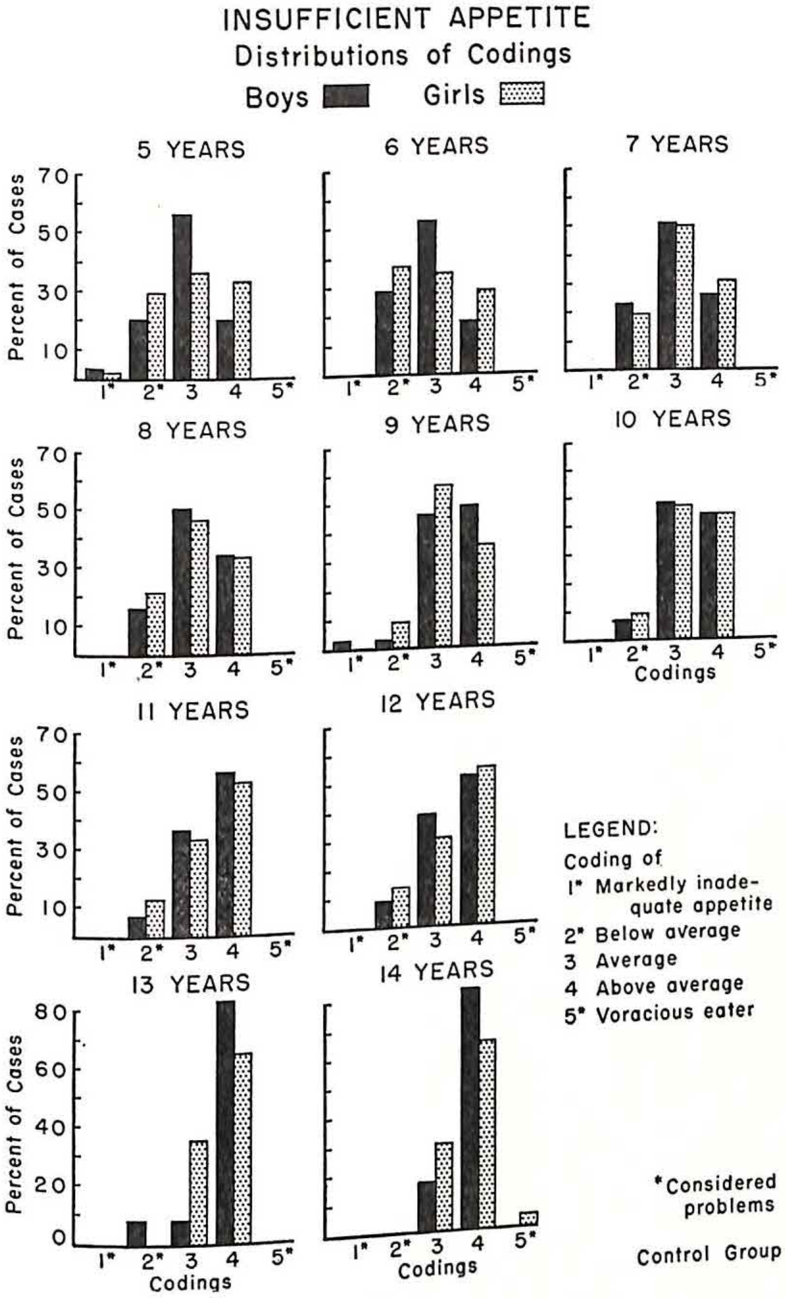

INSUFFICIENT APPETITE
Distributions of Codings
Boys
Girls
5 YEARS
6 YEARS
7 YEARS
8 YEARS
9 YEARS
10 YEARS
11 YEARS
12 YEARS
13 YEARS
14 YEARS
Percent of Cases
70
50
30
10
80
60
40
20
0
1* 2* 3 4 5*
Codings
LEGEND:
Coding of
1* Markedly inadequate appetite
2* Below average
3 Average
4 Above average
5* Voracious eater
*Considered problems
Control Group

Fig. 3

#9. *Food finickiness* (includes specifically conditioned dislikes of foods as well as being a device for dominating family. Aversion to foods producing allergic reactions is not considered a problem.)

(1) Extremely finicky; many active food aversions; refusals, resistive to all new foods. Habitual resistiveness to eating. Refuses one or two important items of diet—milk, meat, or practically all vegetables.

(2) Several food aversions (milk or meat or several vegetables) but will eventually eat them. Food must be fixed "just so." Includes periodic fussing two to three time a week. Resistive to any new foods.

3 Eats most things; a few unimportant dislikes (nonessential items of diet or one or two vegetables); takes eating for granted. May have likes or aversions but eats practically anything.

4 Actively interested in eating; willing to try new foods. May dislike onions, garlic, strong cheese, etc.

5 Never fusses; actively interested in all new foods; excited about trying out new flavors. Enthusiastic even when talking about food.

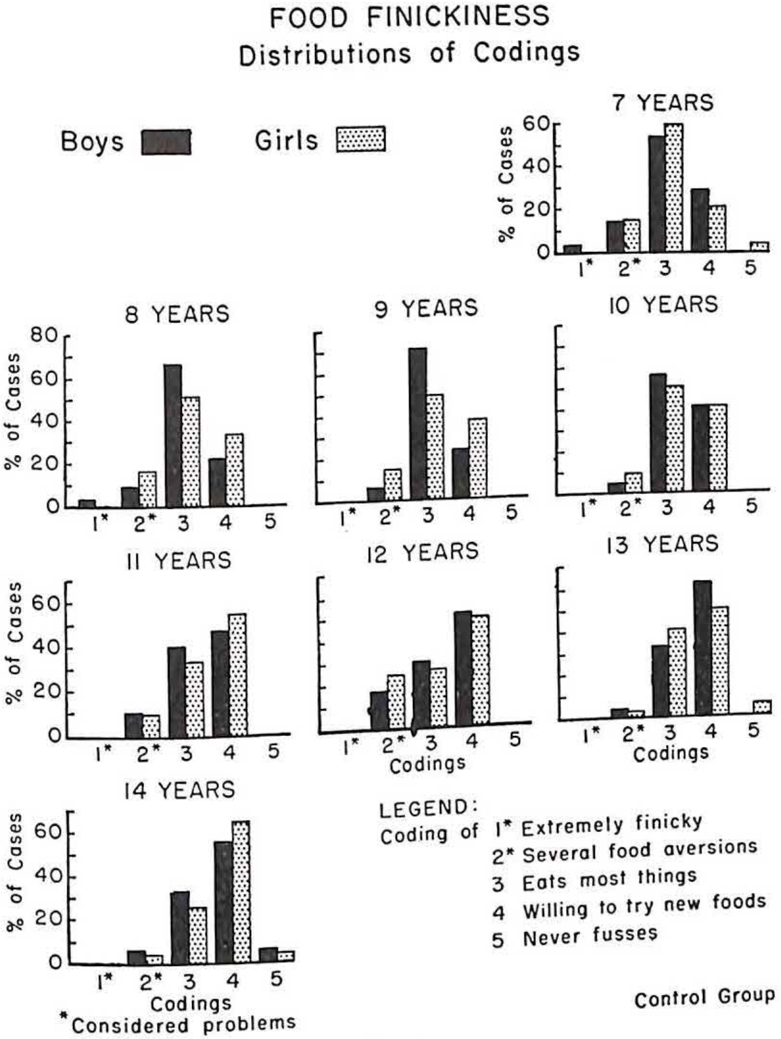

FOOD FINICKINESS
Distributions of Codings
Boys
Girls
7 YEARS
8 YEARS
9 YEARS
10 YEARS
11 YEARS
12 YEARS
13 YEARS
14 YEARS
% of Cases
0
20
40
60
80
1*
2*
3
4
5
Codings
*Considered problems
LEGEND:
Coding of 1* Extremely finicky
2* Several food aversions
3 Eats most things
4 Willing to try new foods
5 Never fusses
Control Group

Fig. 4

D. *Sex Behavior and Attitudes*

#11, 12. *Excessive modesty—exhibitionism.*

(1) Extreme modesty (never lets anyone see him undressed or partly undressed). Very upset during physical examination, even when physician is of same sex. Panicky even when seen in underclothes.

(2) Self-conscious when undressed; ill at ease; keeps covered; obviously embarrassed and uncomfortable.

3 Unconcerned around family, physician, playmates (where parents do not disapprove). Includes cases where girl has been taught not to be undressed in front of father or older brothers; or boys in front of mother and sisters. Includes also adolescents who change from earlier freedom in this respect to habits of privacy. Verbal fuss about getting undressed for examination but no real tension—merely adopting social mores. When exhibitionism is used as a device to annoy parents, but where child has no concern about it (for example, young children wetting on the lawn).

4 Pleased with body. Mild cavorting to show off. Consciousness; no tension.

(5) Compulsive exhibitionism (exposure)—urinating in public, etc.

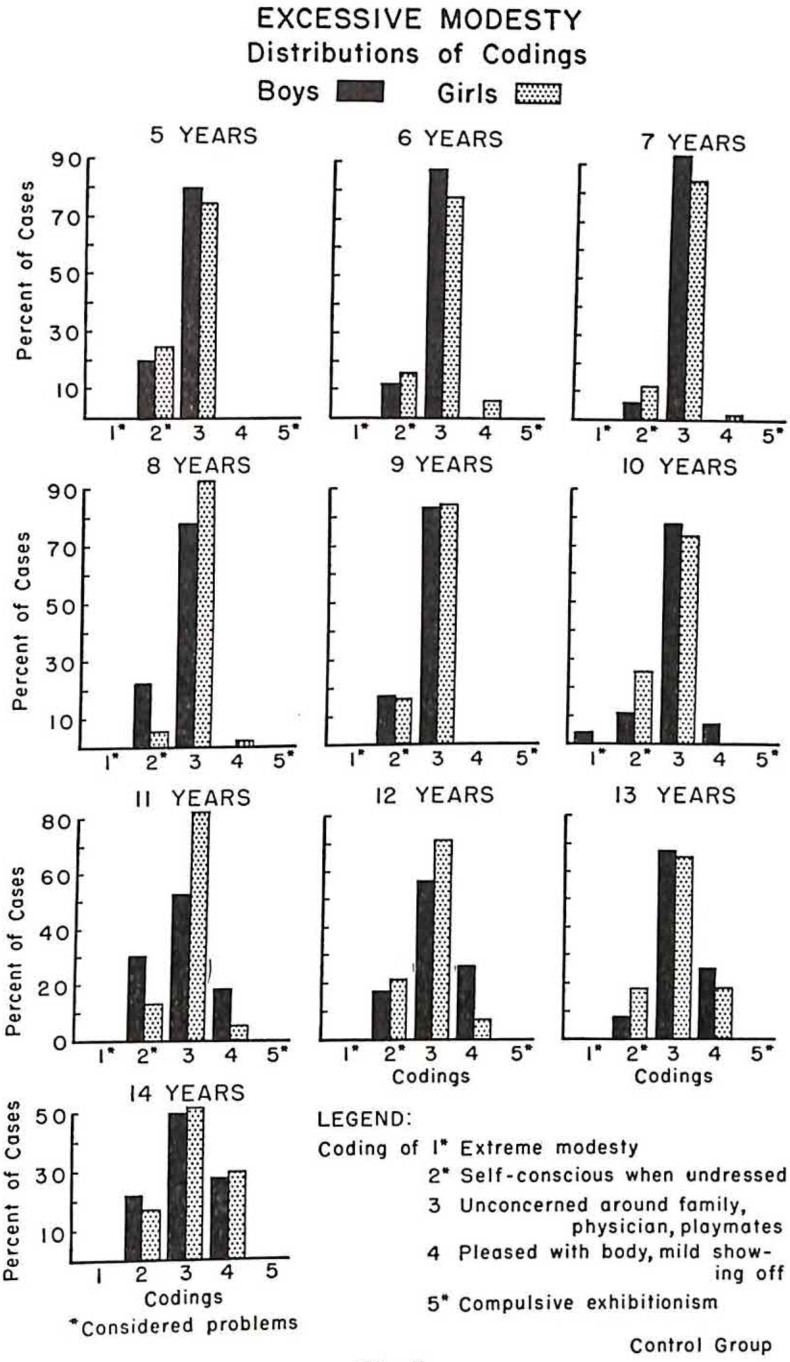

EXCESSIVE MODESTY
Distributions of Codings
Boys
Girls
5 YEARS
6 YEARS
7 YEARS
8 YEARS
9 YEARS
10 YEARS
11 YEARS
12 YEARS
13 YEARS
14 YEARS
Percent of Cases
90
70
50
30
10
80
60
40
20
0
1* 2* 3 4 5*
1 2 3 4 5
Codings
*Considered problems
LEGEND:
Coding of 1* Extreme modesty
2* Self-conscious when undressed
3 Unconcerned around family, physician, playmates
4 Pleased with body, mild showing off
5* Compulsive exhibitionism
Control Group

Fig. 5

#13. *Masturbation.* (On this item, of course, problem classification will vary with maturity.)

(1) At least three or four times a week or more, vigorously stimulates genitalia by manual stimulation with or without orgasm, depending upon physiological maturity; or involving orgasmic equivalent (excitement followed by relaxation); rubbing against furniture, floor, causing friction with clothes. (Individual or social participation.) Includes severe cases where child publicly and compulsively masturbates. (Only direct stimulation of genitalia classified under this heading—rocking, etc., where there does not appear to be actual friction occurring, is not so listed. Symbolic interpretive behavior not included.)

(2) Vigorous stimulation once or twice a week or mild habitual touching more frequently (ticlike pulling at genitalia many times a day).

(3) Absence of overt behavior but considerable tension about it; or infrequent (1 or 2 times in six months) episodes.

4 Occasional or perfunctory touching of genitalia (when needs to go to toilet, during bath, or in response to physical irritation or too tight clothes) with absence of tension about it.

5 Absence of overt behavior and no apparent tension.

#14. *Sex interest.* This classification attempts to describe and subjectively rate intensity of interest in and degree of tension about any items associated with sex. Includes interest in own or others' bodies, elimination processes, sex talk, sex stories, sex play (homo-, hetero-, or autoerotic), information concerning conception, process of delivery, etc.

(1) Great and persisting preoccupation and tension—whether overt, involving compulsive or frequent talk, compulsive behavior or experimentation or repressed, involving panic, flight, or embarrassed silence. Marked embarrassment and discomfort upon seeing family members characteristically demonstrative.

(2) Less intense concern than (1), but still considerable tension (in terms of comparison with own social and age group)—evidenced in talk, experimentation, withdrawal, or anxious silence. At preschool levels, tension shown in "doctor and nurse," "father and mother" play with emphasis on erotic aspects (if there is no evidence of tension or where emphasis is on nonerotic elements, classify under 4). At adolescent level, preoccupation with clothes, erotic play, and so on, to the point of exclusion of most other interests. Acute embarrassment when "sweethearts" are mentioned casually; or compulsive and excessive talk of sweethearts. Very uncomfortable and embarrassed at mildly "off color" stories which are accepted casually or with amusement by their social and age group; or great push to tell stories not accepted by group.

3 Transitory periods of tension. Reactive to new and normal experiences or talk but no lasting affect. Includes tension when discussion of topics relating to sex occurs outside of accepted group (for example, family, chums) in which such discussion would be considered natural. For adolescents, occasional but not acute embarrassment around behavior characteristic of the group with whom they habitually asso-

ciate. Group 3 is designed to cover typical behavior for any age level, with its temporary variations. Includes teasing behavior—for example, at early ages (6 to 8 years or below) pulling up girls' skirts, etc., or at later ages teasing without much real tension.

4 Interest in facts without undue tension. Healthy interest, happy affect. May include considerable talk about growing up, getting married, having children, what the boy friend or girl friend says and does, etc., but pleasure evidenced and no apparent strain. May be conscious of own sexuality but happily so. Erotic interests do not dominate to the exclusion of successful participation in other interests and activities.

5 Neither interest nor tension—either because underdeveloped or because the matter has been accepted in prosaic, matter-of-fact way.

E. *Convulsive and Motor Habits*

#15. *Tics, mannerisms.* Any mannerisms, other than nailbiting, thumbsucking, masturbation, stammering.

(1) Compulsive, pronounced, ticlike behavior occurring daily whether obviously ritualistic or not, and whether involving only small muscle groups. Either severe or frequent or less severe but going off many times a day. (By *severe* is meant involvement that compels attention of anyone.)

(2) Persistent mannerisms. Less often or severe than (1). Obvious enough to be noticed by anyone. Clearing throat, sniffing, hunching up shoulders, squinting, twitching of any facial muscles, tapping with feet, etc.

(3) When child is overfatigued or under emotional pressure or when discussing some emotional topic or when preoccupied, consistently resorts to mild motor ticlike patterns.

4 Few minor transitory mannerisms, for example, rubbing eye, etc. Diffused, unstereotyped, motor discharge or activity.

5 Absence of observed mannerisms or ticlike behavior.

#18. *Nailbiting.*

(1) Extreme and persistent biting of nails or cuticle around nails. Bitten "down to the quick"; fingers disfigured.

(2) Nails kept chewed down [less severe than (1)] but fingers not disfigured.

(3) Mild persistent biting of nails, always evidence of chewed nails.

(4) Mild periodic biting of nails, or pulling of rough nails.

5 Never bites nails; if nails are broken or rough, uses file or scissors or asks mother to.

#19. *Thumbsucking.* (Lipsucking, tongue sucking, or blanket sucking, included under tics and mannerisms.)

(1) Persistent and vigorous thumbsucking occurs major part of time. Callouses may or may not be present but evidence of water-logged skin—bones of thumb or fingers may have become elongated.

(2) Not so extreme or so persistent as (1), but thumb in mouth more than ten or fifteen minutes daily.

(3) Sucks thumb daily but not so much as (2); only when tired, sleepy, or emotionally upset.

(4) Mild episodes of sucking thumb; not daily.

5 Never sucks thumb.

#20. *Activity* (Hyperactive; underactive)

(1) Extreme overactivity and restlessness. Can never be free from activity when awake. Appears propelled by internal drives; activity not reactive to external situation. Activity constantly upsets routine and order. An extreme nuisance.

(2) Definitely above average in restless activity. Very seldom able to sit at quiet games. Fidgets or moves constantly when read to, even when interested. Not so extreme as (1), but obvious enough and characteristic enough to be noticed by anyone. (Not parents' statement in response to own fatigue or to own lower energy level.)

3 Normal activity—takes in robust children with high energy level. Able to sit quietly when interested; or may fidget when forced to sit still in a boring situation. Includes transitory reactive overactivity to a disturbing or exciting situation.

4 Underactive; whether due to lack of physical energy or to emotional preoccupation. Prefers quiet sedentary games.

(5) Extreme inactivity (regardless of cause); inert; sits; walks slowly; never runs; tightened inactivity. Little or no movement but muscles rigid—includes catatonic-like inactivity.

#21. *Speech: enunciation* defects (infantilisms of pronunciation, letter substitution, difficulty with consonant sounds, lalling, lisping, slurring, monotone, or high-pitched voice, inadequate or excessive volume whether or not on a structural basis or merely functional).

(1) Enunciation so poor that speech is very difficult to understand or so unusual in any of the above aspects that it compels attention from anyone. (Record should be kept of foreign regional accents but should not be listed as a problem.)

(2) Enunciation consistently poor; can be understood if attended; or can be understood readily but is striking in some of the above respects.

(3) Mild habitual speech defects—mild letter substitution, lisping, etc., but not occurring throughout vocabulary range; limited to a few words or to a few letter combinations.

4 Enunciation not conspicuous in any particulars and no specific defects.

5 Excellent enunciation; precise, clear, unslurred sounds.

#21. *Speech: stammering* (stuttering) involving incoördination of the respiratory diaphragmatic, and laryngeal mechanisms—shown in hesitancy or blocking in speech; jerky, unrhythmic utterances; or repetition of words or sound units.

(1) Severe stammering, more or less persistently present. So acute at times that is unable to get out any sentences; or, persistent, explosive sounds occurring many times in a conversation. So severe that it characteristically causes acute discomfort to anyone listening. Blocking resulting in temporary complete loss of speech.

(2) Marked stammering, occasionally or at least three times a week perhaps once or twice in a ten-minute conversation; or mild persistent blocking present in any conversation. Intense stammering as severe as (1), but in periods lasting a week or so at a time; then improving for a period, only to recur. Severe enough that it causes discomfort to any listener but conversation can be carried on.

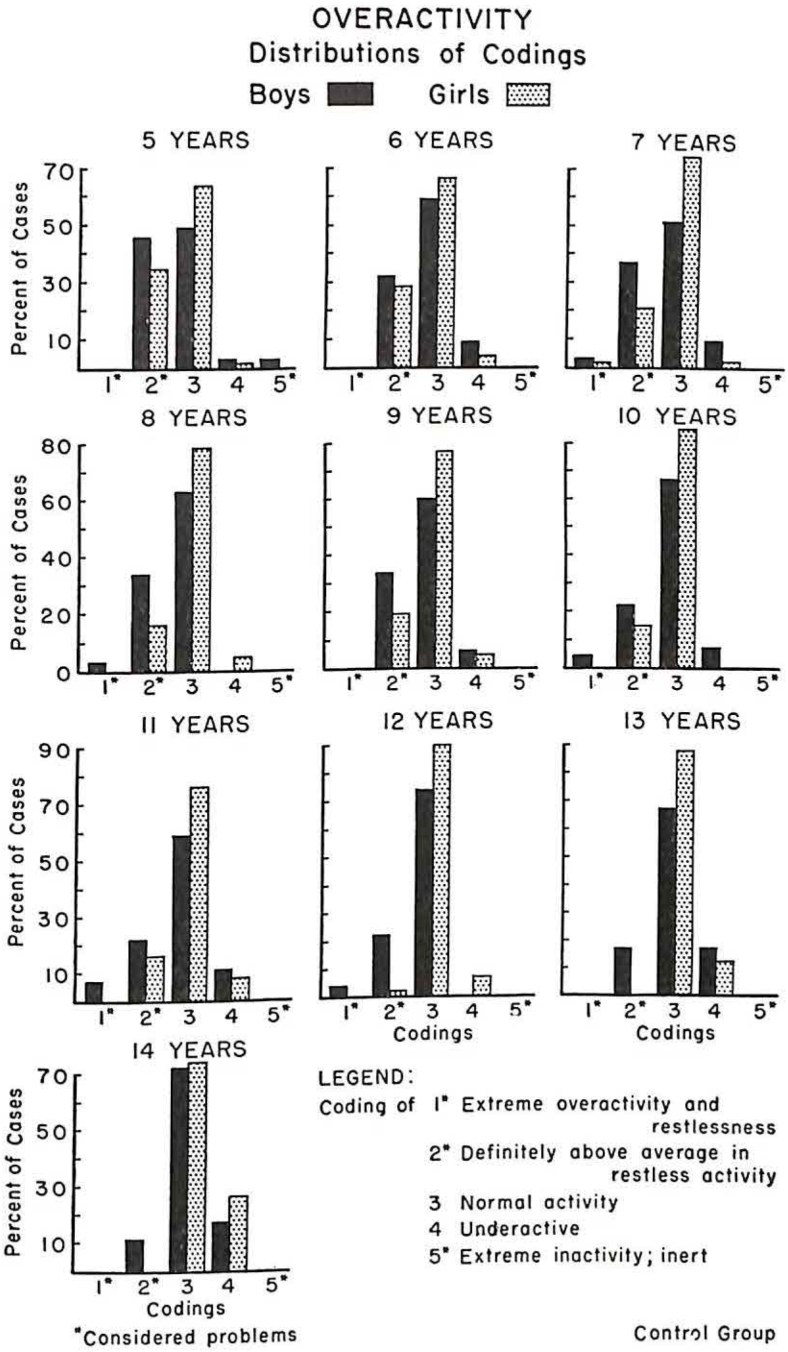

OVERACTIVITY
Distributions of Codings
Boys
Girls
5 YEARS
6 YEARS
7 YEARS
8 YEARS
9 YEARS
10 YEARS
11 YEARS
12 YEARS
13 YEARS
14 YEARS
Percent of Cases
70
50
30
10
80
60
40
20
0
90
1*
2*
3
4
5*
Codings
LEGEND:
Coding of 1* Extreme overactivity and restlessness
2* Definitely above average in restless activity
3 Normal activity
4 Underactive
5* Extreme inactivity; inert
*Considered problems
Control Group

Fig. 6

(3) Occasional episodes of blocking (two or three times a week). Imitative stammering with no tension. Under tension—confusion, blocking or halting not so severe as (1) or (2) but enough to attract attention from any listener.

4 Occasional blocking under very embarrassing situation—when frightened, etc. Imitative stammering lasting *no longer* than a week or two. Confusion in talking on emotional topics.

5 Never stammers or blocks—glib, easy speech.

F. *Social Standards*

#22. *Lying*

(1) Frequent, habitual first reaction to deny or distort facts. Compulsive lying when no immediate purpose seems to be served, *or* lying or distortion of facts is a characteristic pattern for gaining own ends, even when the truth would be as effective. So characteristic that patient is mistrusted by those with whom he has more than a casual contact.

(2) More frequent than average—lies habitually in almost any emergency situation either directly or by implication—to serve an immediate purpose; does not include the diffuse lying classified under (1). Includes easily detected impulsive lies, as well as more complicated and less apparent distortions. (Frequent lying to an unusually severe and rigid parent should be included under (3)—where lying is the only possible means of avoiding extravagant punishment.)

(3) Lies occasionally—to avoid scolding, punishment, or under pressure to make good impression. Not characteristic in all situations but occurs often enough to be a problem. Frequent wish-fulfillment lies. (Excludes protective lying under pressure of tactless persons to whom child owes no frankness.)

4 Lies only under stress, and with a little pressure from himself or others, admits truth easily. Includes occasional protective distortions in interview situations but not characteristic in usual situations. Mild and occasional wish-fulfillment distortion. Lies of loyalty to protect family or friends or in accord with accepted social mores. Mild lies of successful social technique.

5 Never tells lies regardless of provocation and consequences—whether due to extreme and rigid honesty or due to fact that situation is so easy that child has no real provocation.

#22a. *Truancy from home*

(1) Oftener than once a week wanders off from home against orders. Three or more times in six months goes long distances either defiantly or compulsively. Long distance (a) for preschool child, several blocks; (b) primary grades (6 to 10 years), more than a mile; (c) more than 10 years, away from own town or city or several hours' distance from home. Includes sight-seeing trips, visiting, or escape from home.

(2) At least once a week wanders off from home at variance with parents' wishes; or two times in six months has wandered off and gone long distances (as defined above).

(3) Once a month wanders off short distances at variance with parents' wishes. One long trip in six months. After school, more than half an hour's loitering against parents' expressed commands—more than half the time.

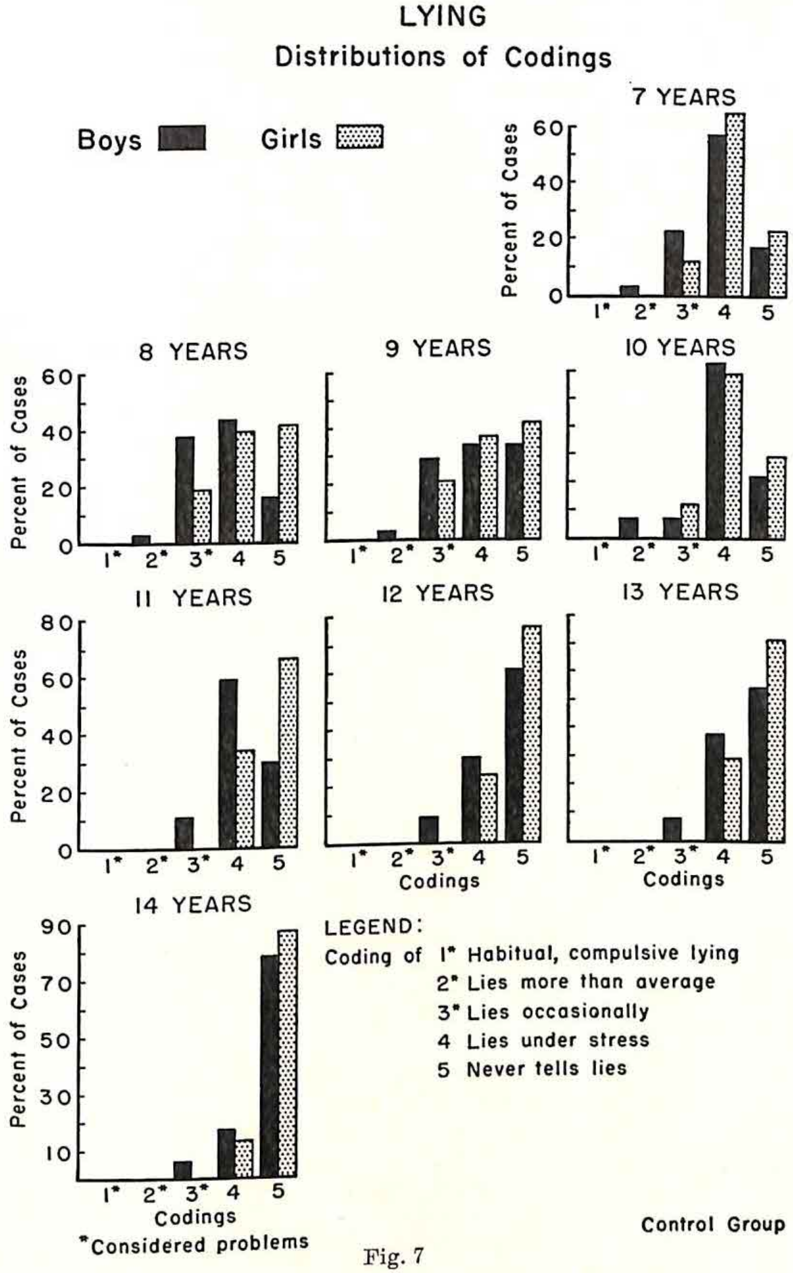

LYING
Distributions of Codings
Boys ■
Girls ▨
7 YEARS
8 YEARS
9 YEARS
10 YEARS
11 YEARS
12 YEARS
13 YEARS
14 YEARS
Percent of Cases
0
10
20
30
40
50
60
70
80
90
1* 2* 3* 4 5
Codings
LEGEND:
Coding of 1* Habitual, compulsive lying
2* Lies more than average
3* Lies occasionally
4 Lies under stress
5 Never tells lies
*Considered problems
Control Group

Fig. 7
]

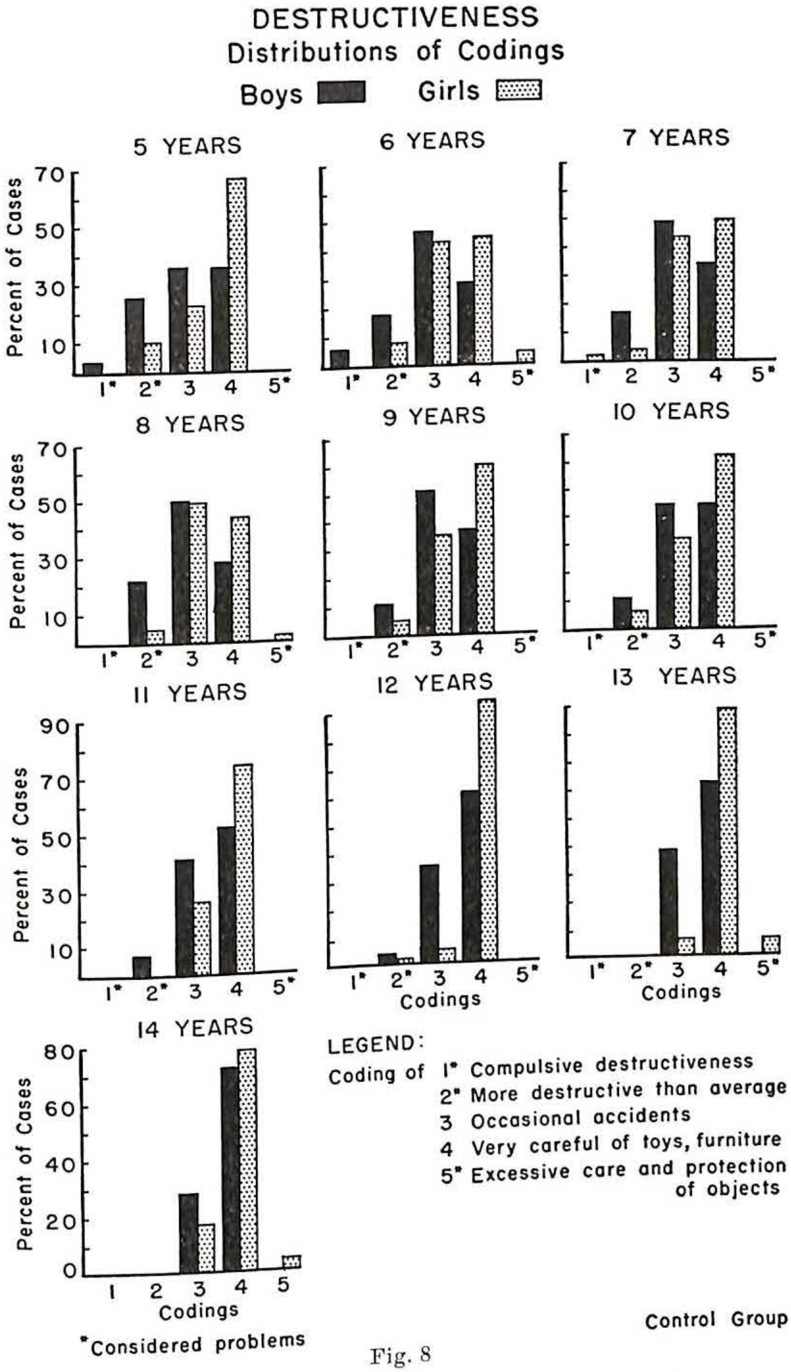

DESTRUCTIVENESS
Distributions of Codings
Boys ■
Girls ▨
5 YEARS
6 YEARS
7 YEARS
8 YEARS
9 YEARS
10 YEARS
11 YEARS
12 YEARS
13 YEARS
14 YEARS
Percent of Cases
10
30
50
70
90
0
20
40
60
80
1*
2*
3
4
5*
1
2
5
Codings
LEGEND:
Coding of 1* Compulsive destructiveness
2* More destructive than average
3 Occasional accidents
4 Very careful of toys, furniture
5* Excessive care and protection of objects
*Considered problems
Control Group

Fig. 8

4 Occasionally (two or three times a week) goes to playmate's house without permission, but not at marked variance with parents' attitude. One or two times a week slow about getting home from school.

5 Never, or practically never, leaves without permission. Reports home promptly; phones if he has to be late.

#22b. *Truancy from school.* (Does not include legitimately excused absence.)

(1) Habitually truant (whether or not condoned by parents). Never attends except under constant pressure. Once a week or more in frequency, on the average.

(2) Truant less than once a week but more than three times in six months on the average.

(3) Truant one to three times in six months; includes absence due to admitted malingering on the part of the child even though successful with parents. Does *not* include excused absence where both child and parent are convinced that feigned illness is real.

4 Only one episode of truancy in a year.

5 Has never been truant.

#23. *Stealing.* (Ratings largely on frequency and severity as based on social standards and irrespective of home standards or whether stolen property is used for self or shared socially.)

(1) Persistent stealing—total disregard or defiance of property rights of others. Compulsive episodes two or three times in six months, regardless of motivation. An acute problem, whether due to frequency or value of things taken.

(2) Chronic petty pilfering whenever an opportunity presents itself (for example, money from parent's purse, five-and-ten-cent stores, etc.); or two times in six months more valuable things.

(3) Occasional episodes of mild pilfering outside of own home—fruit, candy, flowers. One or two episodes in six months of five-and-ten variety, or taking money from parent's purse.

4 Occasionally careless about returning "borrowed" or found property.

5 Never takes anything—a strong sense of the property rights of others. Reports or tries to locate owner of money, toys, or other articles found.

#24. *Destructiveness* or excessive protective concern of objects.

(1) Destroys own things and others', either in anger, retaliation, or extreme carelessness (that is, own toys ruined within week or so after receiving them). Compulsive urge to spoil toys, clothes, belongings of others.

(2) More destructive than average child of his age. Valuable things of others taken apart, even though motivated by curiosity. Once or twice in six months anger expressed in destruction of own property or that of others.

3 Occasional accidents; destructive through curiosity, but some sense of caution; normally careless for his age.

4 Very careful of toys, furniture, dishes, etc. Cares for them and puts them away but not so fussy that he can't enjoy them.

(5) Excessive care and protection of objects; can't enjoy or let others enjoy toys or possessions. Can never have a good time for fear of mussing clothes.

#26. *Selfishness* in sharing or excessive generosity.

(1) Strong resentment against sharing; takes everything for self. Always unhappy unless he gets the biggest portion. Rushes in to help himself first if there is not enough to go round. Hides things so he won't have to share them.

(2) Shares under pressure or reluctantly; unhappy when forced to share; or doesn't share because it never occurs to him—simply concerned with own feelings of possession; or shares only to gain his own end—for example, to get presents in return or to buy favor or privilege, not real sharing but an exploiting technique.

3 Shares normally with those who share with him; may save out favorite toys for own use; or doesn't share with children who might destroy his playthings.

4 Enjoys sharing with others, giving presents. Saves candy for sibs.

(5) Wants to give all his things away; excessive generosity. Compulsive sympathy. Atonement generosity—for example, gives presents to make up for misdemeanors.

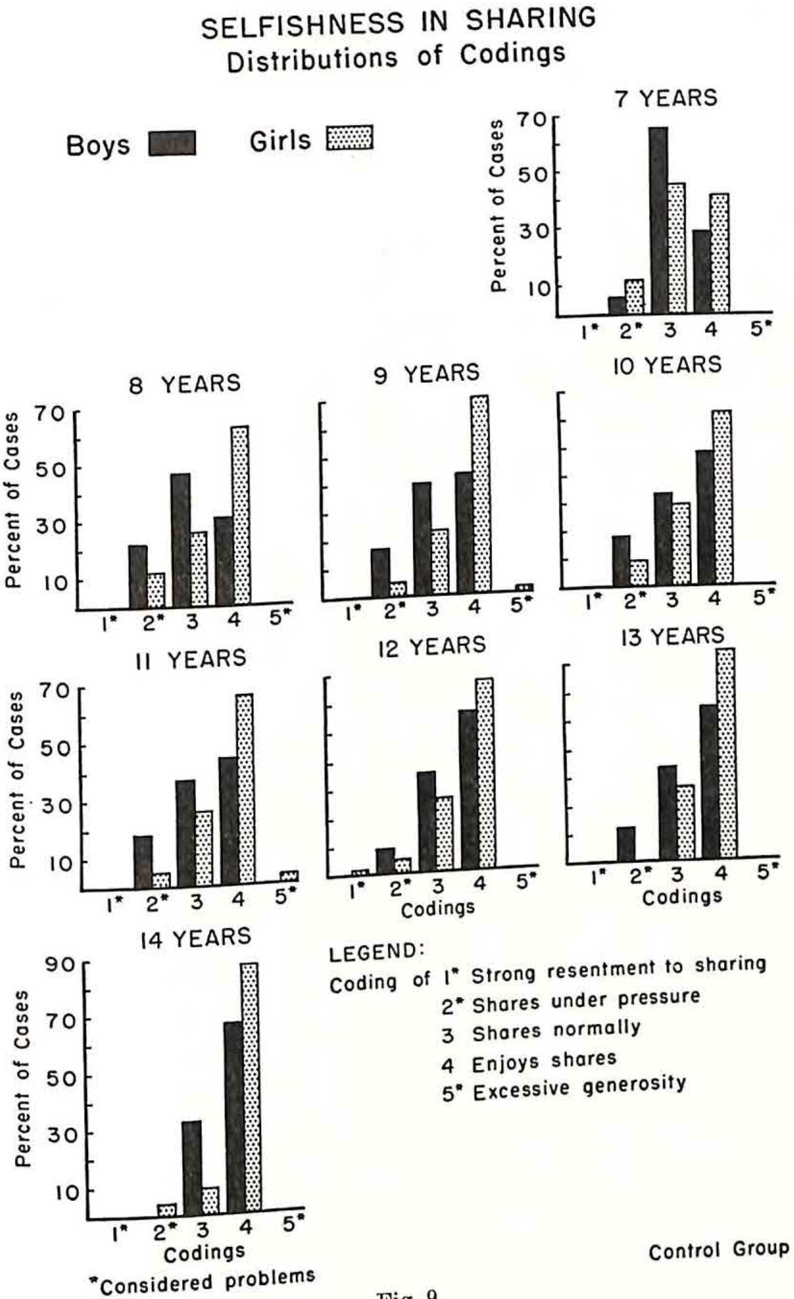

SELFISHNESS IN SHARING
Distributions of Codings
Boys ■
Girls ▨
7 YEARS
8 YEARS
9 YEARS
10 YEARS
11 YEARS
12 YEARS
13 YEARS
14 YEARS
Percent of Cases
10
30
50
70
90
1* 2* 3 4 5*
Codings
LEGEND:
Coding of 1* Strong resentment to sharing
2* Shares under pressure
3 Shares normally
4 Enjoys shares
5* Excessive generosity
*Considered problems
Control Group

Fig. 9

#27. *Quarrelsomeness* or excessive striving to placate. (Regardless of motivation—for example, jealousy, introverted rigidity, or social tension.)

(1) Pronounced tendency to constant quarreling. Has a chip on shoulder; provokes quarrels. Characteristic response to any difference of opinion in play or work situations. Instigates quarrels with little or no apparent provocation.

(2) Quarrels more than average child. Starts more quarrels, responds more extravagantly to a little antagonism in others, but not so extreme as (1) and not so characteristic.

3 Quarrels with real provocation; occasionally starts quarrels. Child on whole gets along well but may have one playmate who antagonizes him to the point of quarrels.

4 Indulges in less quarreling than the average; because not in a quarrelsome environment or because he has good techniques for sidestepping friction.

(5) Real drive to placate; refusal to quarrel either by withdrawal or excessive yielding to opponent. Very disturbed or uncomfortable at the least sign of friction.

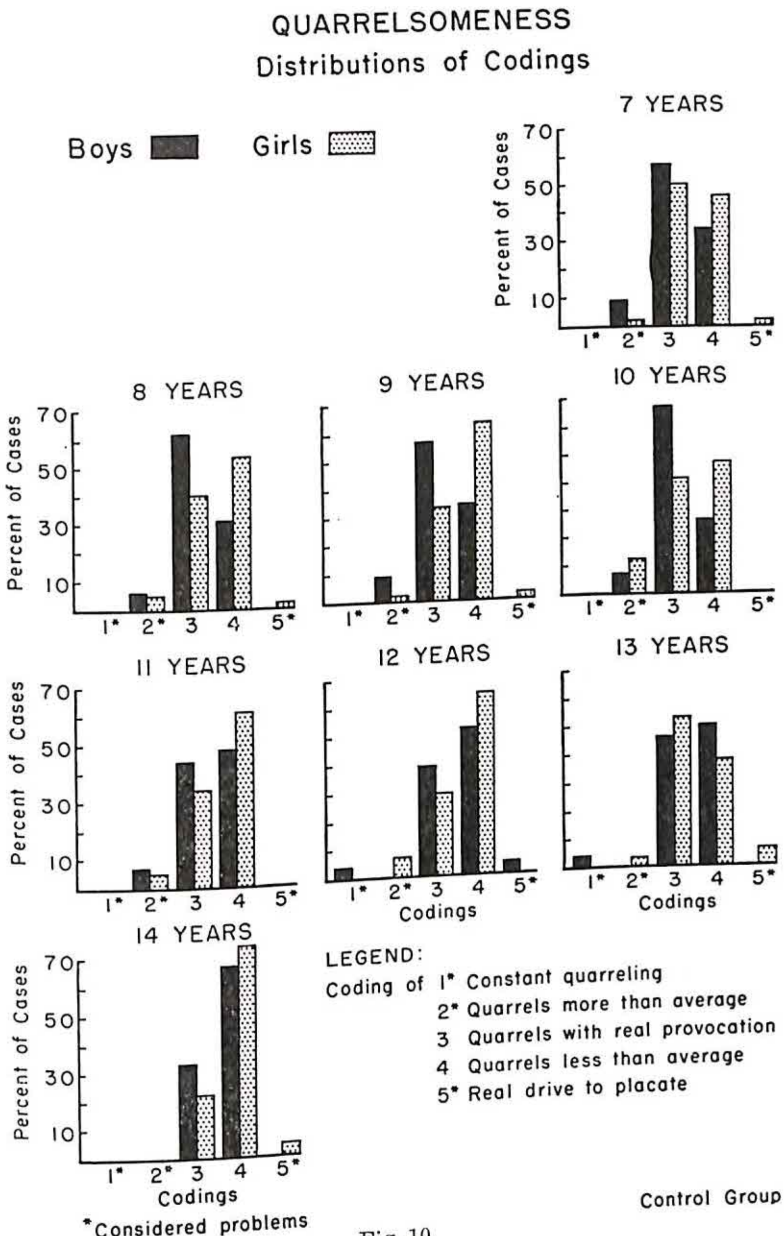

QUARRELSOMENESS
Distributions of Codings
Boys
Girls
7 YEARS
8 YEARS
9 YEARS
10 YEARS
11 YEARS
12 YEARS
13 YEARS
14 YEARS
Percent of Cases
70
50
30
10
1* 2* 3 4 5*
Codings
LEGEND:
Coding of 1* Constant quarreling
2* Quarrels more than average
3 Quarrels with real provocation
4 Quarrels less than average
5* Real drive to placate
*Considered problems
Control Group

Fig. 10

G. *Personality Characteristics*

#28. *Excessive emotional dependence or excessive independence*

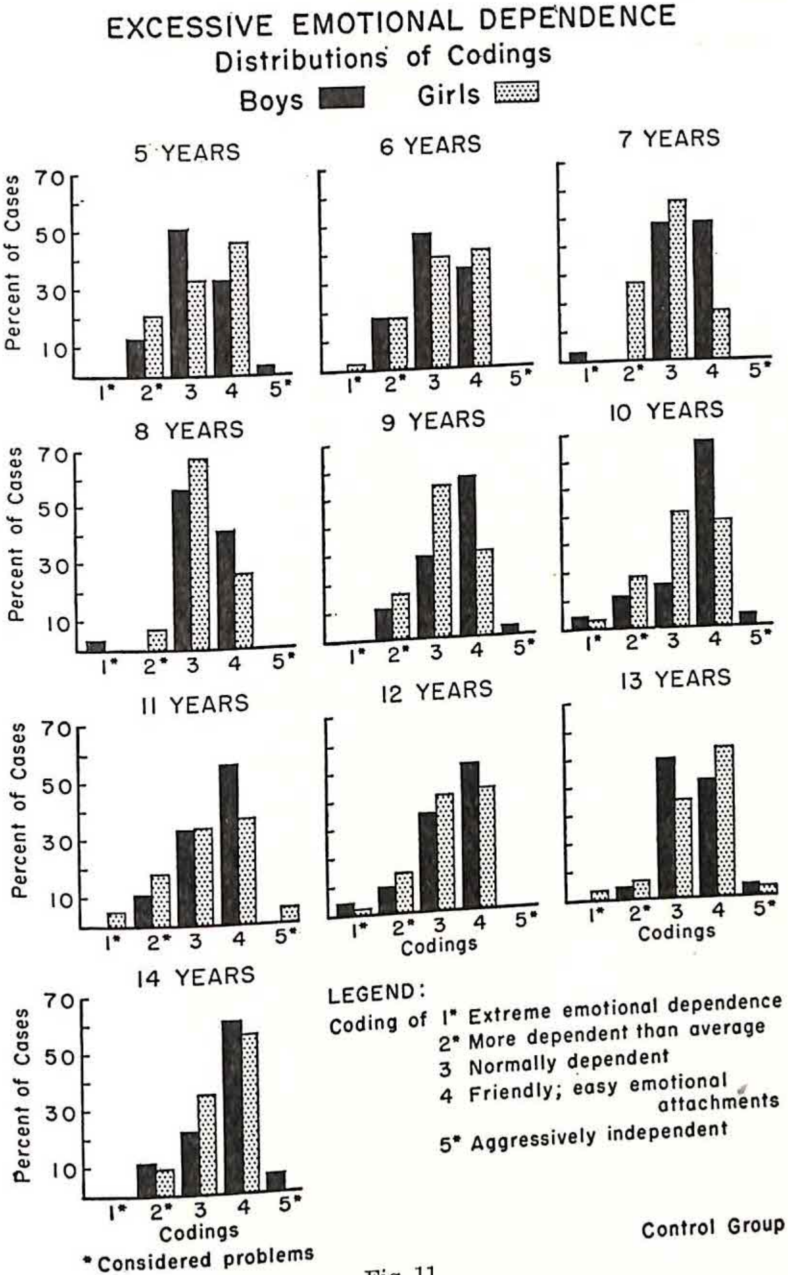
(1) Extreme emotional dependence upon parents or others (nurse, sibs) which may be shown in a variety of ways—in constant attention demanding, in extravagant waiting on parents, in extreme overreactivity to parents' mood. Parents' approval or disapproval dominates completely child's interests and values. Parent fixation—evidence of intense attachment whether evidenced in hostility or hectic devotion; stable or ambivalent.

(2) More dependent and emotionally tied than average, but less extreme than (1) although covering similar items. Has some emotional values not tied up in parents but characteristically in any trying situation seeks parental sheltering and bolstering.

3 Normally dependent in appropriate situations, independent in others. Emotional give and take. May have periods of mild regressive behavior when comfort is sought but not characteristically. Leans on parent or blames parent in some trying situations but on the whole, dependence not excessive for age level. Can both approve or disapprove of certain parental characteristics without tension. Emotional attachments not exclusively tied up in parents. Free to make other emotional attachments easily with no sense of violation or competition.

4 Friendly, easy, emotional attachments—not excessively possessive or demanding although a close and happy relationship may exist. Self-sufficient but friendly. Objectively accepts parents or other people as persons and not as indispensable projected facets of own personality.

(5) Aggressively independent; cuts off from any close emotional attachments; or so narcissistic that he is incapable of close attachments.



EXCESSIVE EMOTIONAL DEPENDENCE
Distributions of Codings

LEGEND:
Coding of 1* Extreme emotional dependence
2* More dependent than average
3 Normally dependent
4 Friendly; easy emotional attachments
5* Aggressively independent

* Considered problems

Control Group

Fig. 11

#29. *Excessive demanding of attention* (showing off, etc.)

(1) Constant demanding of attention shown in a variety of ways. For example, a younger child wants constant service, demands to be dressed, fed—wants things done for him that he can easily do for himself. May be due to indulgent training or due to a constant drive to get security by having people wait on him, buy him presents, show him special consideration. Very unself-reliant, insecure, restless, anxious without attention constantly from others. The equivalent of an adult who demands special attention in hospitals, restaurants, stores, from marital partner, etc. May seek this attention indirectly by excessive waiting on others to obligate them or insuring disapproving attention through misbehavior, telling dramatic fibs, etc. (May or may not be associated with showing off.) Or constant seeking of sympathy by making most of emotional situations or physical symptoms.

(2) Demands more attention than average—directly or indirectly. Less persistent or extreme than (1), but enough to be apparent and annoying even to a casual visitor.

3 Enjoys attention but interest in activities only partly dependent on approval or disapproval from others. Seeks attention if it's available but functions easily without it if it is not.

4 Less interest in attention from others than average; occasional need for attention but for most part absorbed in interests or unaware of attention from others.

5 Usually self-reliant; self-approval more important than social approval or disapproval. Can entertain self for long periods. Own audience. Enjoys activities for their own sake.

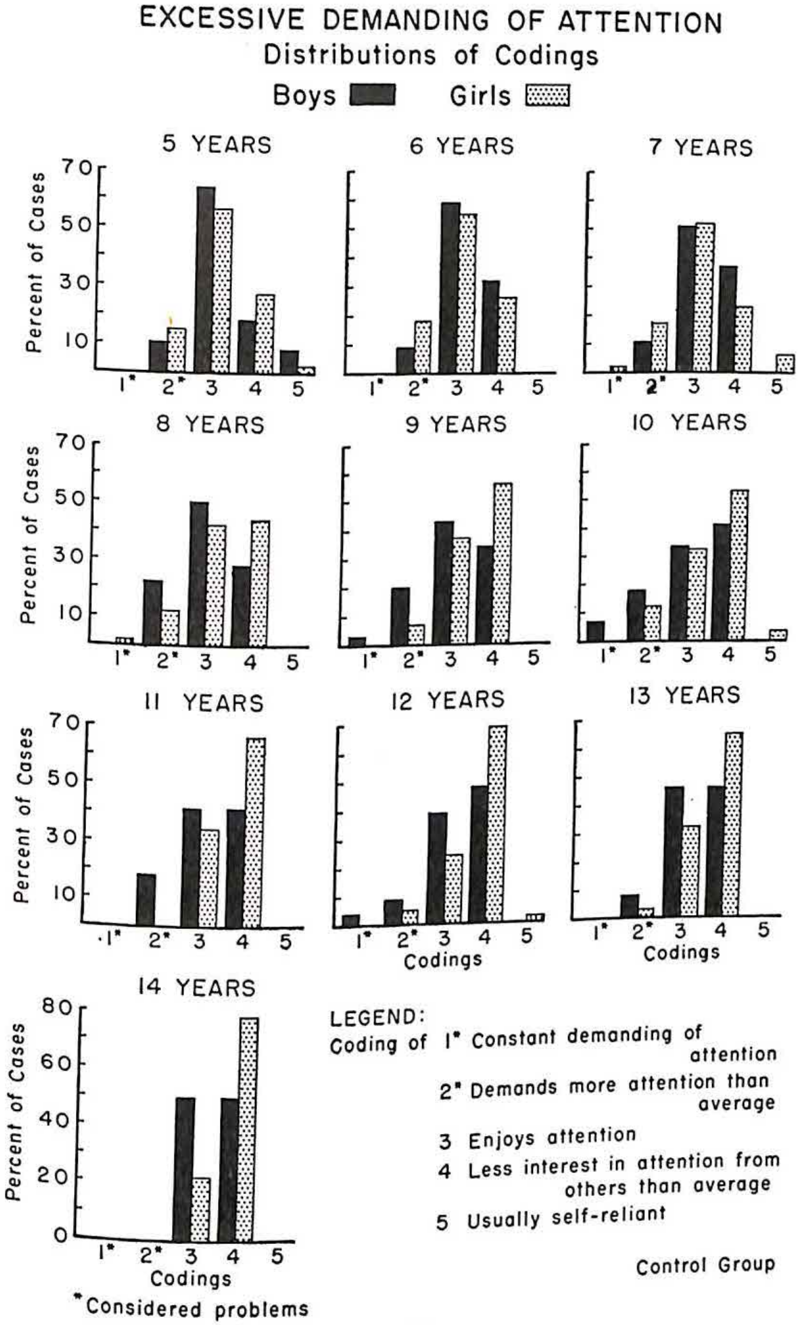

EXCESSIVE DEMANDING OF ATTENTION
Distributions of Codings
Boys
Girls
5 YEARS
6 YEARS
7 YEARS
8 YEARS
9 YEARS
10 YEARS
11 YEARS
12 YEARS
13 YEARS
14 YEARS
Percent of Cases
70
50
30
10
80
60
40
20
0
1* 2* 3 4 5
Codings
LEGEND:
Coding of 1* Constant demanding of attention
2* Demands more attention than average
3 Enjoys attention
4 Less interest in attention from others than average
5 Usually self-reliant
Control Group
*Considered problems

Fig. 12

#35. *Extremely sensitive—callous.* Either with reference to self or others. Classification not necessarily made on a basis of permanent personality patterns but characteristic of behavior existing at time of interview. It may be necessary to give a double rating when there are differences in reactivity or sensitiveness to self and others.

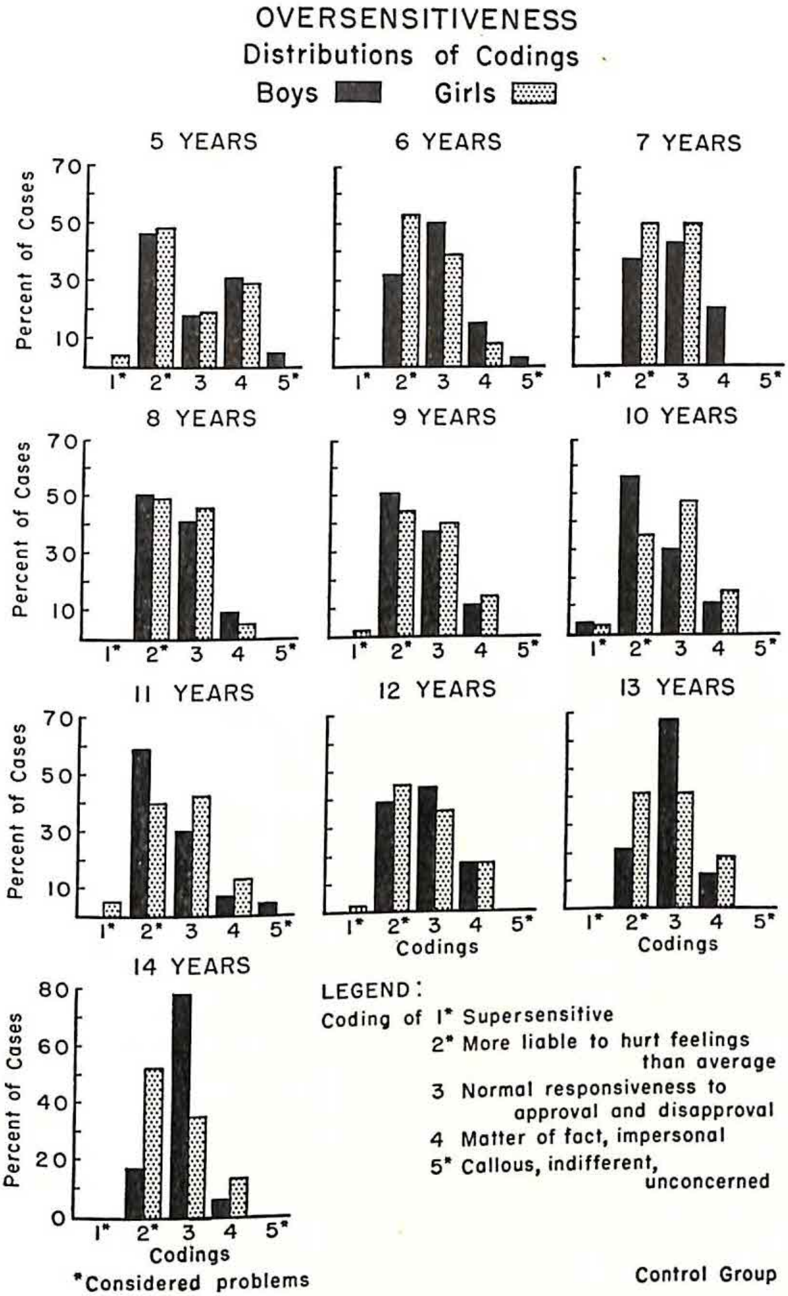
(1) Supersensitiveness in regard to social relationships, clothes, size, intelligence, etc. Extravagantly easy to hurt his feelings. Either self-centered or exploitable at criticism, mistreatment, or troubles of others. Overreactivity (tears, running from situation, worries) to sad stories. Constantly reacts to hearing others commended by feeling comparatively very inadequate. Reacts to any impersonal correction extravagantly. Constantly misconstrues any objective statement as an intended criticism. *Paranoid* reactions. Extreme guilt mechanism whether projected or having self-reference.

(2) More liable to have hurt feelings than average—thin-skinned; excessive discomfort. Same sort of reactions as in (1) but much less extreme. Depreciatory or sensitive in some fields but in other fields not unduly so. Constant evidence that size, deformities, etc., interfere with social adjustments; for example—child with strabismus who always avoids meeting people or child who stammers and will never recite or go to parties. Periods of marked overreactiveness to "misbehavior" or other strains. To get along has to have an environment more protective than average or has to adjust to a level far below potentialities (for example, has to associate with people really inferior to himself—younger or less intelligent playmates) in order to feel comfortable.

3 Normal responsiveness to approval and disapproval. (Includes the large bulk of children who are sensitive on one or two items.) Reactive to real situations but gets a working solution so that inadequacy doesn't pervade whole personality except episodically. Fields in which he feels insecure but for most part takes self and position for granted. Appropriate or mildly extravagant response to real situations but has compensatory security in other fields. Doesn't enjoy being teased but has a protective technique to meet it.

4 Takes more criticism than average to "hurt feelings." Matter-of-fact, impersonal, realistic acceptance of proficiencies and deficiencies, personality characteristics and intelligence; or completely unself-conscious. No emotionally loaded comparisons with other people—can take teasing and bear bantering with no real upset.

(5) Callous—markedly insensitive, indifferent, unconcerned, or thick-skinned. Impervious to criticism from others and markedly unself-critical. Insensitive or indifferent to the feelings of others. Unaware of many values that a normal person would consider fundamental.



OVERSENSITIVENESS
Distributions of Codings
Boys ■ Girls ▨

5 YEARS
6 YEARS
7 YEARS
8 YEARS
9 YEARS
10 YEARS
11 YEARS
12 YEARS
13 YEARS
14 YEARS

LEGEND:
Coding of 1* Supersensitive
2* More liable to hurt feelings than average
3 Normal responsiveness to approval and disapproval
4 Matter of fact, impersonal
5* Callous, indifferent, unconcerned

*Considered problems

Control Group

Fig. 13

#36. *Extreme timidity—bravado* (in physical situations). Not to be judged from the point of view of an overanxious parent, but in terms of other children.

(1) Extreme fearfulness or apprehension in any new situations or where there is nothing of physical danger. Always magnifies any dangers. Won't try out activities even when he sees all his playmates doing so.

(2) More cautious than average—watches others first before participating; always tense, so that efficiency is interfered with. (This does not include pretended timidity used by girls as a social technique.)

3 Normally cautious; enjoys mild chances—in certain new situations shows cautiousness. Overcautious in one specific situation (for example, fear of swings, after bad fall) but not a pervasive reaction.

4 Takes and enjoys more chances than average child; among the first to try out new slides, etc. Adventurous but not foolhardy. (If there is evidence that it is compensatory for cowardice, classify under 5.)

(5) Ignores real danger; daredevil, foolhardy. Compensatory covering for cowardice. Takes knowingly all sorts of chances for the thrill of it.

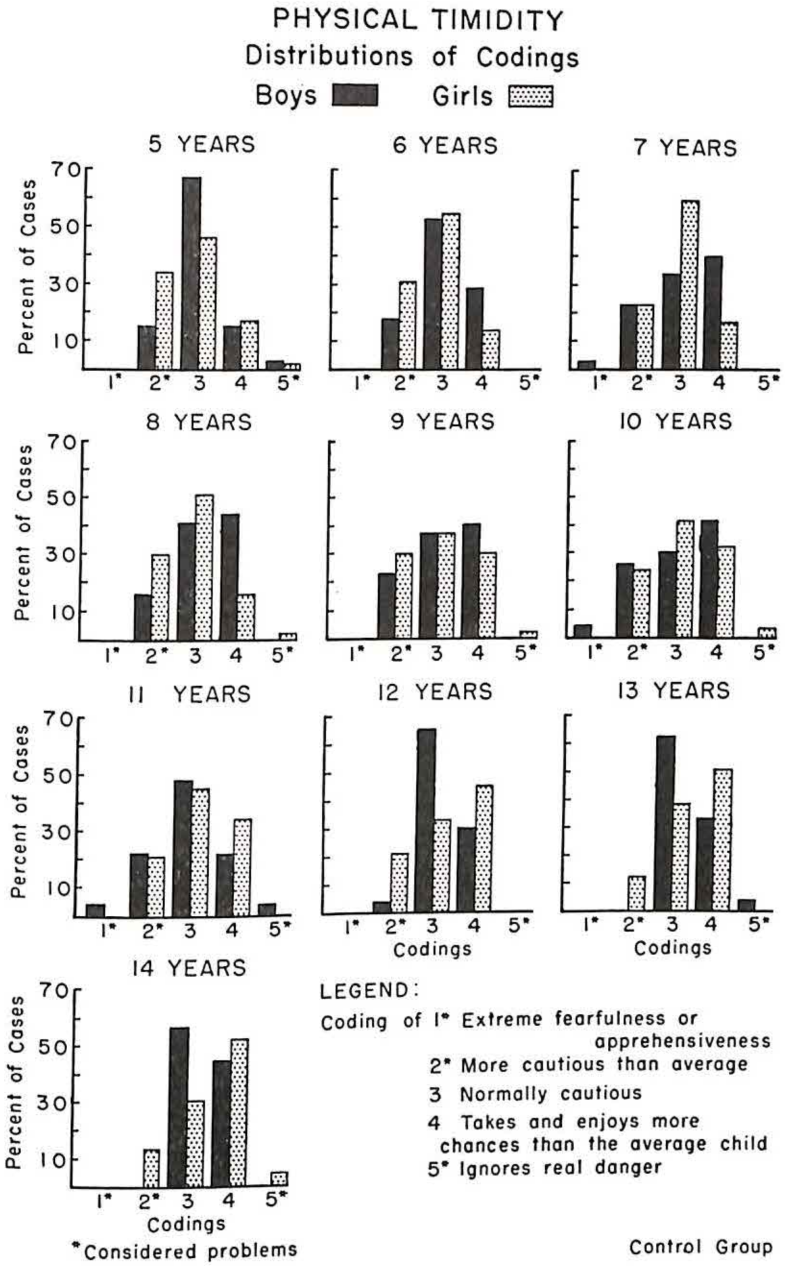

PHYSICAL TIMIDITY
Distributions of Codings
Boys ■ Girls ▨
5 YEARS
6 YEARS
7 YEARS
8 YEARS
9 YEARS
10 YEARS
11 YEARS
12 YEARS
13 YEARS
14 YEARS
Percent of Cases
70
50
30
10
1* 2* 3 4 5*
Codings
LEGEND:
Coding of 1* Extreme fearfulness or apprehensiveness
2* More cautious than average
3 Normally cautious
4 Takes and enjoys more chances than the average child
5* Ignores real danger
*Considered problems
Control Group

Fig. 14

#36b. *Pronounced shyness—extreme friendliness.*

(1) Exceptionally shy, acute discomfort to the point of panic, withdrawal or antagonism in social situations or in meeting new acquaintances—any age, either sex, individual or group contacts. Not at ease even with friends he's known a long time. Avoids situations where he will meet people; won't look at people, hangs head, etc. Can't respond even when other persons or playmates make friendly overtures. Social contacts characteristically a hazard.

(2) Shy—standoffish, easily embarrassed, anxious. Waits for the other person to make the first friendly gesture. Very shy only with certain types of people, either sex. *Acute* discomfort at meeting a group, although successful with individuals, or vice versa. So shy that he's handicapped in reciting at school or in play relations with the group into which he is thrown. Very uncomfortable around the friends of his family or makes straining efforts to appear at ease, but shows unmistakable tension.

3 Easy with certain types of adults or children, not with others. Or easy with one sex but somewhat uncomfortable with the other. Shy but makes effort to overcome it in most situations. Not shy around people he knows and likes. Initial shyness with strangers but it wears off quickly if stranger is pleasant and friendly. On the whole, functions reasonably well in social situations.

4 Characteristically at ease whether friendly, unexpansive or indifferent to the social situation. Practically never "rattled" by a social situation.

5 Exceptionally easy and quick social contacts. Completely at ease in almost any group or with almost any person. Enjoys meeting new people.

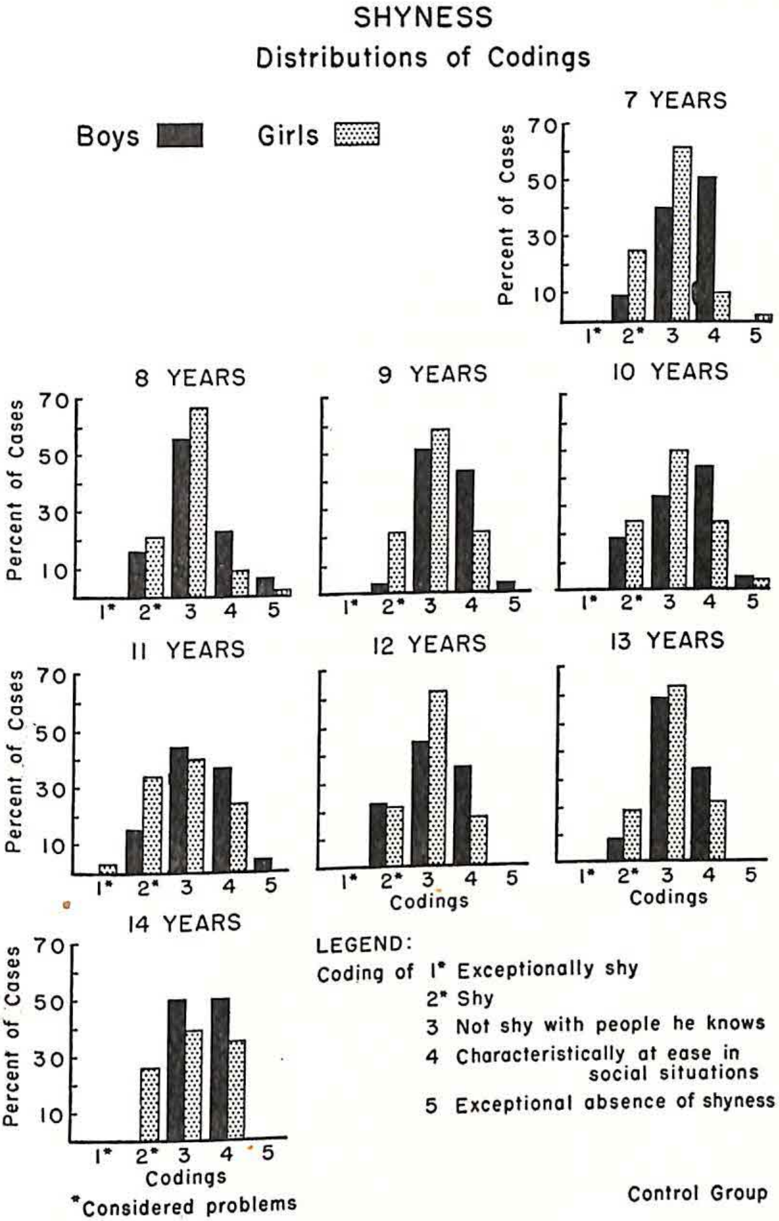

SHYNESS
Distributions of Codings
Boys ■
Girls ▨
7 YEARS
8 YEARS
9 YEARS
10 YEARS
11 YEARS
12 YEARS
13 YEARS
14 YEARS
Percent of Cases
70
50
30
10
1* 2* 3 4 5
Codings
*Considered problems
LEGEND:
Coding of 1* Exceptionally shy
2* Shy
3 Not shy with people he knows
4 Characteristically at ease in social situations
5 Exceptional absence of shyness
Control Group

Fig. 15

#37. *Specific fears.*

(1) Extreme, acute fear or fears—paralyzing, incapacitating, completely dominating behavior. Occurs every time child is in the presence of a dog, high place, fire, dark, when it thunders, when he sees a man with a beard, etc., or when he hears talk of such things. (Marked vasomotor responses.) This group concerns intensity of reaction to one or more specific situations.

(2) Upsetting, intense, but less disorganizing than (1). Includes flight from situation rather than the paralyzed action of (1).

(3) No real panic, but acute discomfort—for example, always gets someone to go with him into unlighted rooms, wants light left on, crosses street to avoid meeting all dogs, shows evidence of tension when fire, bogie man, burglars, etc., are mentioned.

(4) Slight apprehension (for example, mild fear of dark, dogs, etc.) but doesn't withdraw from situation if someone else is around. Includes mild excitement which youngsters seek in detective stories, movies, radio thrillers, where excitement is in the form of mild temporary apprehension.

5 No fear. (Legitimate caution in presence of poisonous snakes, spiders, etc., not included under fear; nor is the feminine technique of acting afraid.)

#38. *Extreme swings of mood—unusually stable.*

(1) Extreme instability of mood. Either internally motivated or reactive. Marked variability; periods of real depression or elation. (Real evidence of childhood equivalents of manic-depressive trends—periods of inactivity, low spirits; overactivity and high spirits.)

(2) Mood more variable than average for age whether motivated internally or exaggerated responsiveness to real situations; frequent but not persistent mood changes—ups and downs lasting only a day or part of a day, but mood so volatile that one can never count on child. Characteristically overreactive make-up.

3 Normal responsiveness—no extravagant swing without real cause (for example, somberness in face of a somber situation but normal recovery when situation eases up).

4 Takes considerable provocation to produce mood swing. Runs on even keel—always find him the same except under very unusual situations.

5 Unusually stable; even keel in face of disturbing or changeable situations. Stolid or unreactive.

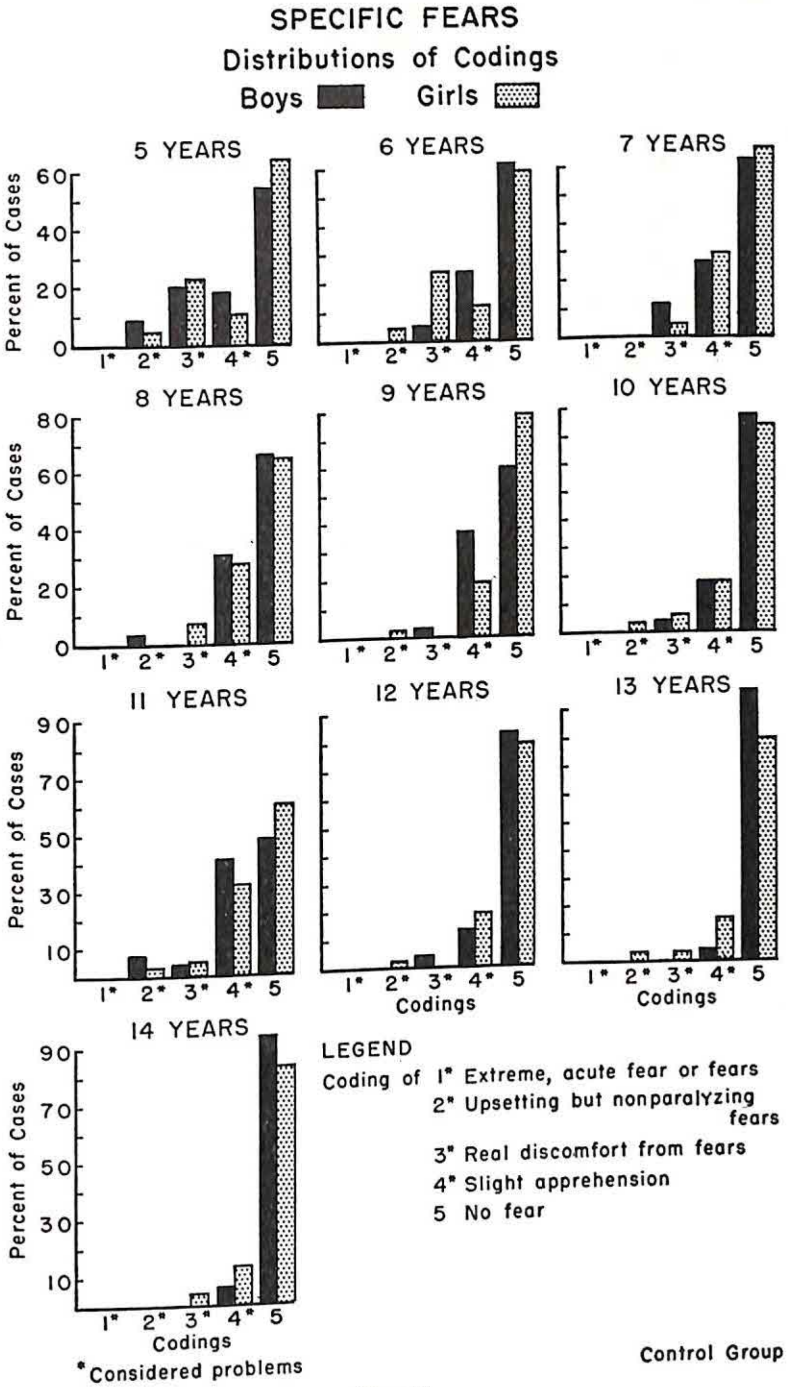

SPECIFIC FEARS
Distributions of Codings
Boys ■ Girls ▨
5 YEARS
6 YEARS
7 YEARS
8 YEARS
9 YEARS
10 YEARS
11 YEARS
12 YEARS
13 YEARS
14 YEARS
Percent of Cases
0
20
40
60
80
10
30
50
70
90
1* 2* 3* 4* 5
Codings
LEGEND
Coding of 1* Extreme, acute fear or fears
2* Upsetting but nonparalyzing fears
3* Real discomfort from fears
4* Slight apprehension
5 No fear
*Considered problems
Control Group

Fig. 16

#38a. *Somber—gay.* (If associated with mood swing, it may be necessary to check both (1) and 5 or (1) and 4, if within the past six months both ends of the descriptive scale have been reached).

(1) Very somber or sad whether a stable personality characteristic or a depressive swing. Very difficult to make smile or laugh; marked lack of gaiety and fun—unresponsive to the gaiety of others.

(2) Much more somber, less happy than average. Here again either stable seriousness or reactive seriousness or depression are included, but the degree is less marked than in (1). Characteristically serious minded—takes life heavily. Can't be flippant or casual about anything. May or may not be associated with worrisomeness or anxiety. Spontaneous gaiety very uncharacteristic but may respond mildly to gaiety of others.

3 For most part happy—occasional reactive somberness and appropriate seriousness. Not outstanding either as far as somberness or gaiety are concerned.

4 More cheerful than average—smiles easily, full of fun. Characteristically optimistic—light-hearted, spontaneous, no evidence of strain or compensatory "gaiety."

5 Constant, bubbling gaiety. Characteristically overoptimistic (even in face of trying situations), whether compensatory or direct.

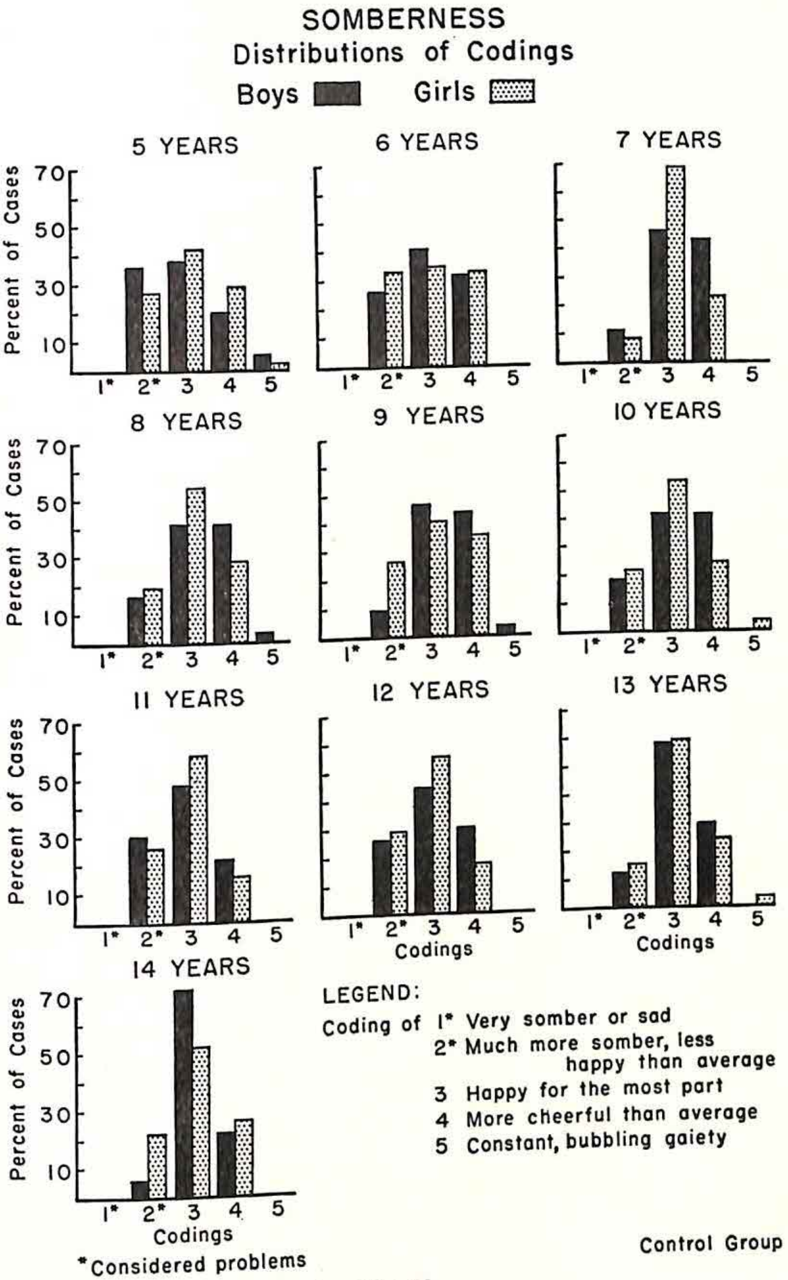

SOMBERNESS
Distributions of Codings
Boys ▇
Girls ▨
5 YEARS
6 YEARS
7 YEARS
8 YEARS
9 YEARS
10 YEARS
11 YEARS
12 YEARS
13 YEARS
14 YEARS
Percent of Cases
70
50
30
10
1* 2* 3 4 5
Codings
LEGEND:
Coding of 1* Very somber or sad
2* Much more somber, less happy than average
3 Happy for the most part
4 More cheerful than average
5 Constant, bubbling gaiety
*Considered problems
Control Group

Fig. 17

#40. *Negativistic—extremely suggestible.*

(1) Extreme and pervasive negativism. Habitual resistiveness and rigidity or compulsive habitual urge to do the opposite of what is expected, or to do nothing. Emotional attitude is "No, I won't."

(2) Resistive above average to suggestions, but not so extreme as (1) or periodic sprees of (1), in relation to one or two people. More difficult to fit into daily routine than average. Habitually takes the "opposite" side of an argument. Argues every step. May be very resistive at home and not at school or vice versa. Either directly resistive or resistance is a matter of defensive protection against demands, expectations, or unfavorable comments of others (for example, child who won't try for fear of falling short of his own or parents' expectations).

3 Fairly pliable; occasional resistive episodes; reactive stubborness. The child who rebels against fretful or stupid techniques is included here—if it doesn't spread to a generalized resistiveness to decent techniques. Includes children who are stubborn around certain people but respond pliably with most people.

4 Follows routine as a matter of course. Accepts suggestions more easily than average; minding not a matter of competition. Enjoys coöperation in social situations; open-minded.

(5) Excessive suggestibility—stupid docility, no values of own. Does anything anyone tells him to. A "yes man."

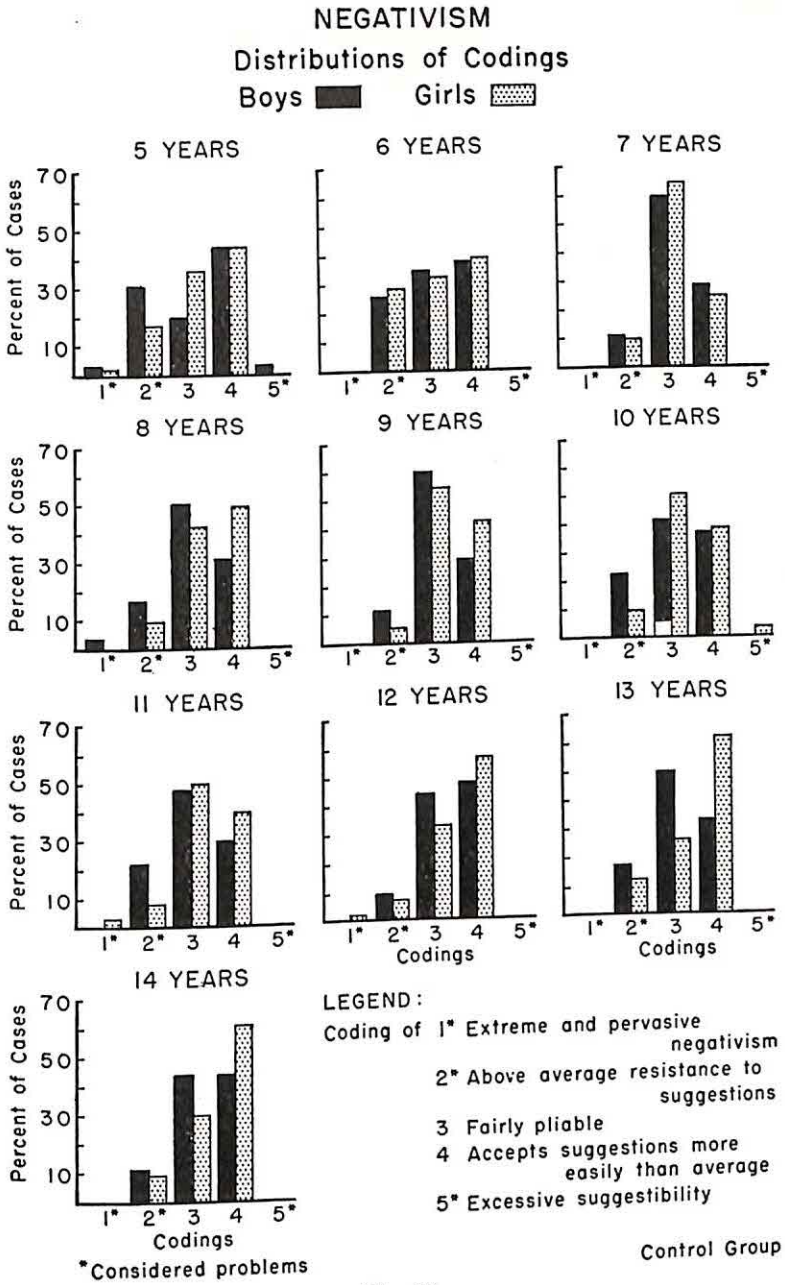

NEGATIVISM
Distributions of Codings
Boys ■ Girls ▨
5 YEARS
6 YEARS
7 YEARS
8 YEARS
9 YEARS
10 YEARS
11 YEARS
12 YEARS
13 YEARS
14 YEARS
Percent of Cases
70
50
30
10
1* 2* 3 4 5*
Codings
LEGEND:
Coding of 1* Extreme and pervasive negativism
2* Above average resistance to suggestions
3 Fairly pliable
4 Accepts suggestions more easily than average
5* Excessive suggestibility
*Considered problems
Control Group

Fig. 18

#41. *Extremely irritable—placid.* Largely physiological or tensional irritability, overactivity, etc. Does not include "spoiled," overindulged children who are never satisfied but who seem physiologically stable.

(1) Chronically irritable or fretful and chronically marked fretful or irritable overreactivity (high strung). Trigger responses or marked effort at inhibition followed by explosions. Child characteristically "on edge" so that slightest thwarts or startles set him off. Extreme annoyance at ticking of clocks, at clothing, smells, etc. (Very easily upset by sensory environment.) Characteristic irritability of the rigid introvert.

(2) More irritable, fretful, and reactive than average. Less extreme irritability and not such marked overreactivity as (1), but easily fretful, startled, or extravagant reactivity to an annoying situation.

3 Normally reactive; occasional flare-ups. Nothing outstanding in either direction characteristically, but has fields or situations of easy annoyance. However, behavior not characteristically pervasively overreactive.

4 Rarely annoyed or disturbed; less irritably reactive than average child. Unreactive where most children would be annoyed. Not easily fretted or startled.

5 Extremely phlegmatic; not irritable (with real provocation). Fretful overreactivity practically never occurs, whether due to a less irritable organism or a nonirritating environment.

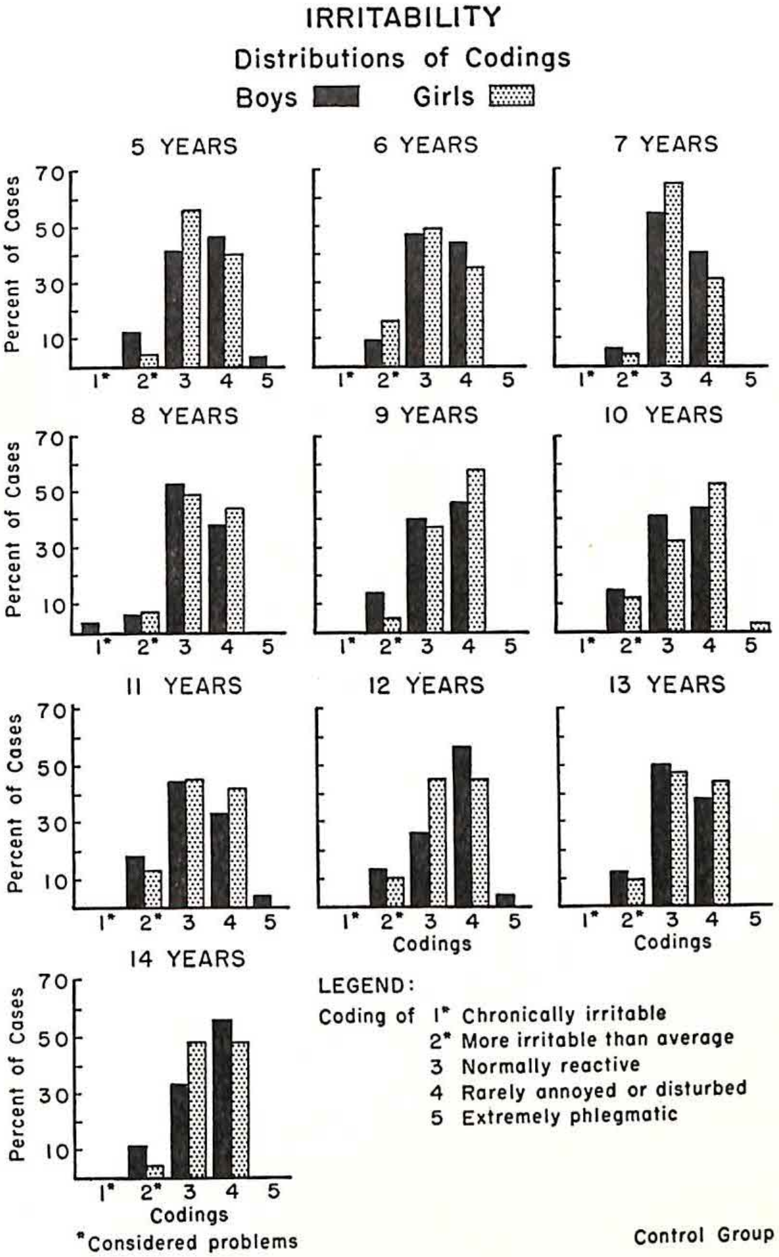

IRRITABILITY
Distributions of Codings
Boys ■
Girls ▨
5 YEARS
6 YEARS
7 YEARS
8 YEARS
9 YEARS
10 YEARS
11 YEARS
12 YEARS
13 YEARS
14 YEARS
Percent of Cases
70
50
30
10
1* 2* 3 4 5
Codings
LEGEND:
Coding of 1* Chronically irritable
2* More irritable than average
3 Normally reactive
4 Rarely annoyed or disturbed
5 Extremely phlegmatic
*Considered problems
Control Group

Fig. 19

#42. *Temper tantrums: severity.* In terms of both emotional involvement and overt behavior.

(1) Severe explosions—(a) biting, kicking, striking, throwing things, destruction of property, banging head; (b) verbal explosions—swearing, screaming, shouting accompanied by marked emotional reactions. Anger completely dominates the behavior. Complete loss of control.
(2) Screaming with activity (for example, stamping feet); verbal attacks less severe than (1). Emotional involvement not so severe that complete loss of control is evidenced; some direction of activity is possible. Includes severe patterns of overt behavior with little involvement—for example, as a technique to upset or gain own ends.
(3) Mild activity or less intense screaming than (2). Less intense verbally expressed anger. Severe as (2), but over in a minute. Staged mild temper behavior with little or no involvement—can stop performance immediately with no apparent physiological hangover, or evidence of anger, vasomotor reactions, but doesn't get into the striped muscles.
4 Fretting or mild nonovert anger. Reactive to irritation.
5 Anger reactions practically nonexistent.

Temper tantrums: frequency.

(1) Several times a day (twice or more).
(2) Once a day (four times a week or one time a day on the average).
(3) Two or three times a week.
(4) More than one time a month but not more than once a week.
5 Once a month or less.

Combined codings of severity and frequency:

(1)		(2)		(3)		4		5	
D	*F*	*D*	*F*	*D*	*F*	*D*	*F*	*D*	*F*
1	1	1	4	1	5	3	5	4	5
1	2	2	3	2	5	4	1	5	1
1	3	2	4	3	3	4	2	5	2
2	1	3	1	3	4	4	3	5	3
2	2	3	2			4	4	5	4
								5	5

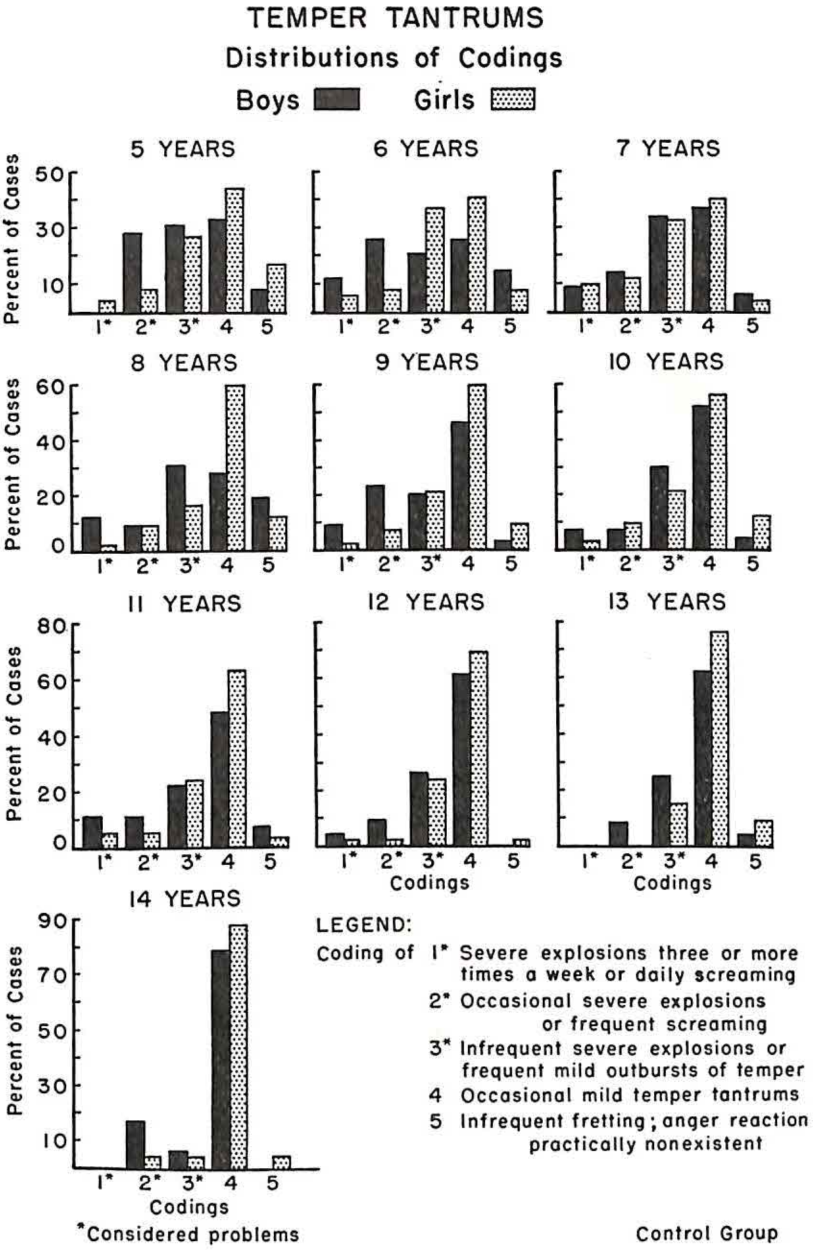

TEMPER TANTRUMS
Distributions of Codings
Boys ■
Girls ▨
5 YEARS
6 YEARS
7 YEARS
Percent of Cases
50
30
10
1* 2* 3* 4 5
8 YEARS
9 YEARS
10 YEARS
60
40
20
0
11 YEARS
12 YEARS
13 YEARS
80
60
40
20
0
Codings
14 YEARS
90
70
50
30
10
LEGEND:
Coding of 1* Severe explosions three or more times a week or daily screaming
2* Occasional severe explosions or frequent screaming
3* Infrequent severe explosions or frequent mild outbursts of temper
4 Occasional mild temper tantrums
5 Infrequent fretting; anger reaction practically nonexistent
*Considered problems
Control Group

Fig. 20

#43. *Jealousy.* Competitive attitude in the field of affection, whether shown in aggressive or withdrawing behavior, in persistent dreams, in verbal criticisms, or compensatory solicitude.

(1) Extreme jealousy pervading whole personality. Overt attacks; bites, hits, or verbally abuses or lies to damage anyone regarded as a competitor in affection; or to anyone whose affection he wants unshared with others. Or marked tension shown in withdrawing behavior, hurt feelings, tears, or silent suffering with a marked letdown in gaiety, spontaneity, and confidence.

(2) Less extreme than (1), but a constant source of tension. Always uncomfortable when others are praised or shown affection. Or mild withdrawing, loss of gaiety, or insists upon equal or greater attention.

(3) Occasional mild jealousy but not a pervasive pattern. Hurt feelings over attention to others shown either by withdrawing, loss of gaiety, showing off, or misbehavior, etc., to attract attention to self. Occasionally complains that sib gets the best of everything. Some tension but not unduly emotional about it.

4 No real jealousy. Aware when others are shown affection or granted more favors, but not really upset. Companionable or protective. May want reassurance of affection occasionally, but is readily satisfied.

5 Never jealous; no evidence of competitive attitudes in the fields of affection, either because unaware or indifferent because little is at stake in a relationship.

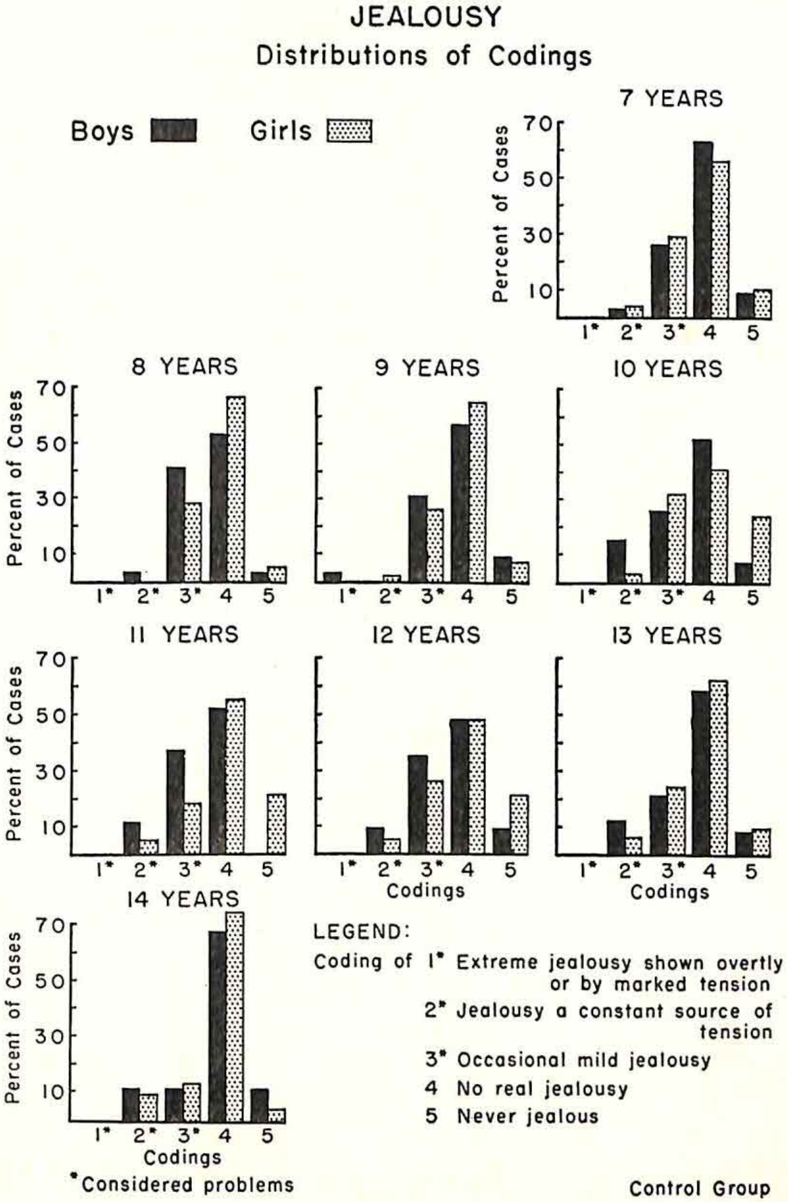

JEALOUSY
Distributions of Codings
Boys
Girls
7 YEARS
8 YEARS
9 YEARS
10 YEARS
11 YEARS
12 YEARS
13 YEARS
14 YEARS
Percent of Cases
70
50
30
10
1* 2* 3* 4 5
Codings
LEGEND:
Coding of 1* Extreme jealousy shown overtly or by marked tension
2* Jealousy a constant source of tension
3* Occasional mild jealousy
4 No real jealousy
5 Never jealous
*Considered problems
Control Group

Fig. 21

#44. *Competition.*

(1) Extreme or hectic drive to excel competitors; either won't play if he can't win, or always picks inferior opponents, or cheats to win. Beating his competitors practically his only satisfaction in a play or work situation. Competitive drives dominate major part of his activities—a diffused set extending to many people and to all sorts of situations which to most children would not be competitive.

(2) Enjoys excelling competitor to the point of being upset when he loses; takes his failure to win very hard, or can't restrain an overt expression of satisfaction when he wins. Not so extreme as (1) but characteristic and noticeable by anyone with whom he comes in contact. Either several fields in which competitive drive is very pronounced but not so extreme as (1); or has one field in which it is terribly important to excel others.

3 Is stimulated by competitive situations and enjoys excelling, but can accept defeat without much strain. Periodic competitive sprees but not persistent and pervasive nor extreme.

4 No real competitive relationship; enjoys games for the fun of playing them but relatively unimportant who wins.

(5) Sensitive to competitive situations but gets disorganized, is let down, unproductive, or flees from them. Resistive in negative way. Extremely discouraged about his abilities; or appears to seek defeat compulsively.

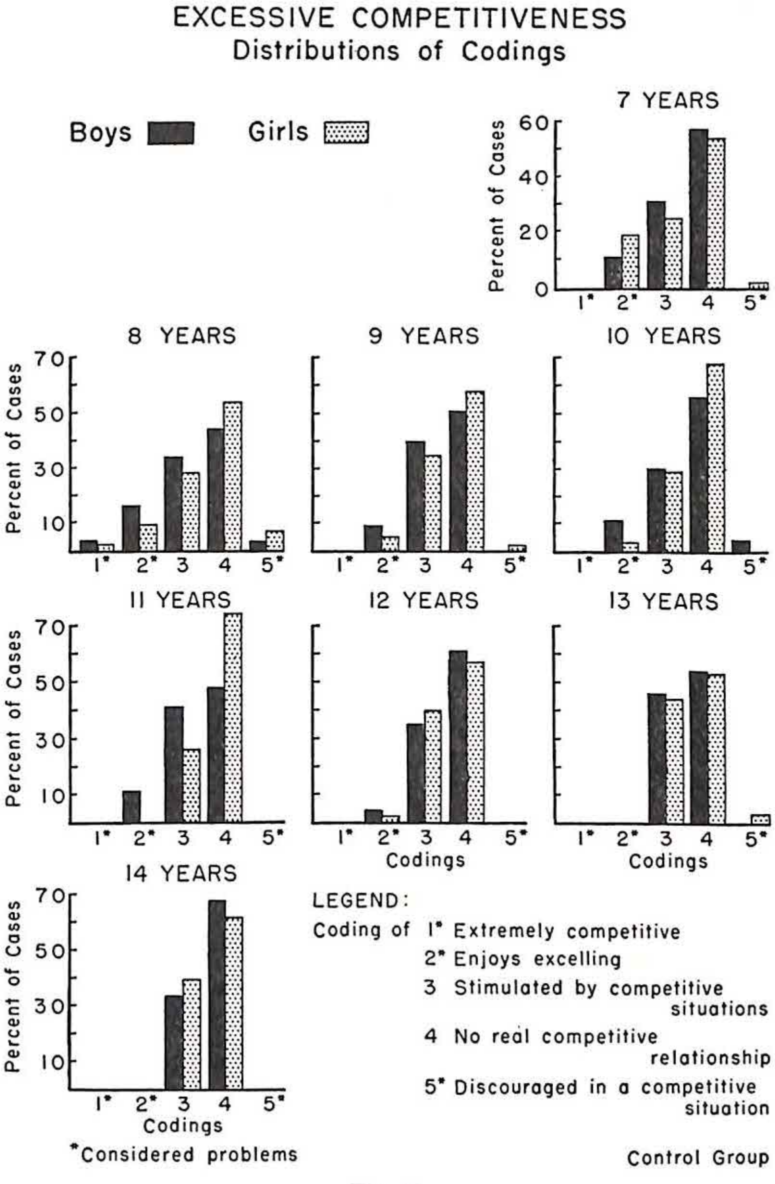

EXCESSIVE COMPETITIVENESS
Distributions of Codings
Boys
Girls
7 YEARS
8 YEARS
9 YEARS
10 YEARS
11 YEARS
12 YEARS
13 YEARS
14 YEARS
Percent of Cases
0
10
20
30
40
50
60
70
1*
2*
3
4
5*
Codings
*Considered problems
LEGEND:
Coding of 1* Extremely competitive
2* Enjoys excelling
3 Stimulated by competitive situations
4 No real competitive relationship
5* Discouraged in a competitive situation
Control Group

Fig. 22

#45. *Reserve—spontaneity.* Concerns degree of expressiveness, of affection, anger, sorrow, joy, disappointment, aspirations, feelings of inadequacy. Where there is great variability of expressiveness in different fields, a double coding may be required (for example, a person extremely inhibited about showing affection and very expressive about showing irritations would be recorded 1 and 4) but where striking variability is absent the coding should be on a basis of most characteristic behavior. The problem nature of any of the following descriptions depends upon the community mores; obviously the rating (2) would be more of a problem in a volatile community than in a community with reserved habits and values for reserve.

(1) Extremely reserved, practically never expresses feelings involved in any of the above fields. Extremely inhibited emotionally. So reserved that he characteristically produces feelings of strain and awkwardness in those around him in response to his own strain and awkwardness. Tied up emotionally; extreme sense of privacy about all feelings.

(2) More reserved than average. Expresses feelings only around one or two persons. Never a full expression of feelings—whether this is due to blocking of emotional expression, or to built-up habits of rationalization that any show of feelings is vulgar, or to worry lest he would show no discretion "if he let himself go."

3 Normally expressive. Reserved around some people but not around others. Certain feelings unexpressed and kept to himself. May express affection but not anger or vice versa. However, not extremely reserved or extremely expressive in any field. Has for most part his inhibitory and expressive habits adjusted to the mores of his social group—a person not conspicuously expressive or reserved in comparison with his social group is included here.

4 More expressive than average. Either very spontaneous and volatile, "wears his feelings on his sleeve," or open, uninhibited, unashamed expression of integrated feelings.

(5) Markedly more expressive and less inhibited than average or than social mores approve. Identifies himself wholeheartedly with his feelings of the moment and expresses them without consideration of social expediency. Lives out one emotional role after another; even highly ambivalent ones in turn. "Is terribly sweet when he's sweet and terribly naughty when he's naughty." Emotional exhibitionism.

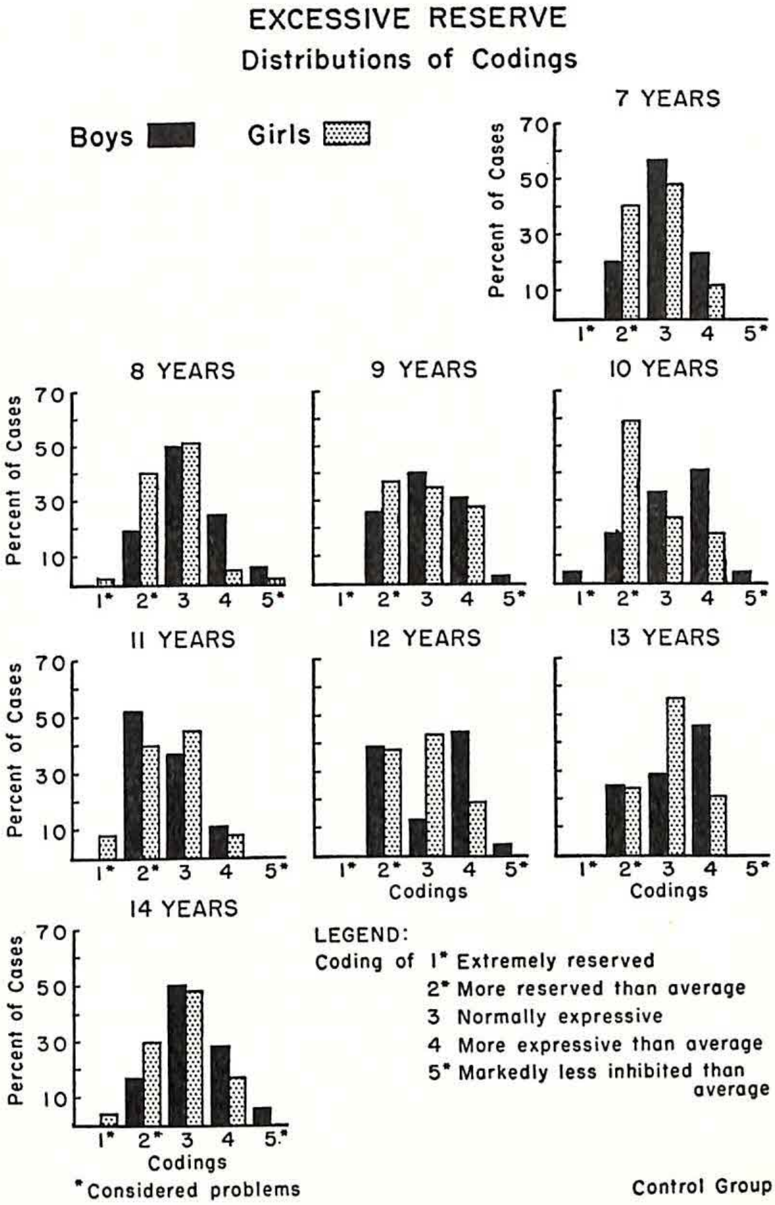

EXCESSIVE RESERVE
Distributions of Codings
Boys
Girls
7 YEARS
8 YEARS
9 YEARS
10 YEARS
11 YEARS
12 YEARS
13 YEARS
14 YEARS
Percent of Cases
70
50
30
10
1* 2* 3 4 5*
Codings
LEGEND:
Coding of 1* Extremely reserved
2* More reserved than average
3 Normally expressive
4 More expressive than average
5* Markedly less inhibited than average
*Considered problems
Control Group

Fig. 23

# 46. *Unself-reliance:*

(1) Always insists on being helped with routine tasks—dressing, washing face and hands, etc. Will not perform tasks if left to do it alone.

(2) Prefers and asks for help in performing routine tasks, but will do them himself if urged, or if left alone. Verbally protests at not being assisted. Dawdles.

3 Performs most routine tasks automatically, without asking or waiting for assistance. Accepts help if given, especially for difficult tasks. May expect and ask for help with difficult tasks.

4 Never asks for assistance in routine tasks; avoids it if possible, and protests mildly when it is given.

5 Vigorously refuses any assistance. Strongly opposes any assistance thrust upon him.

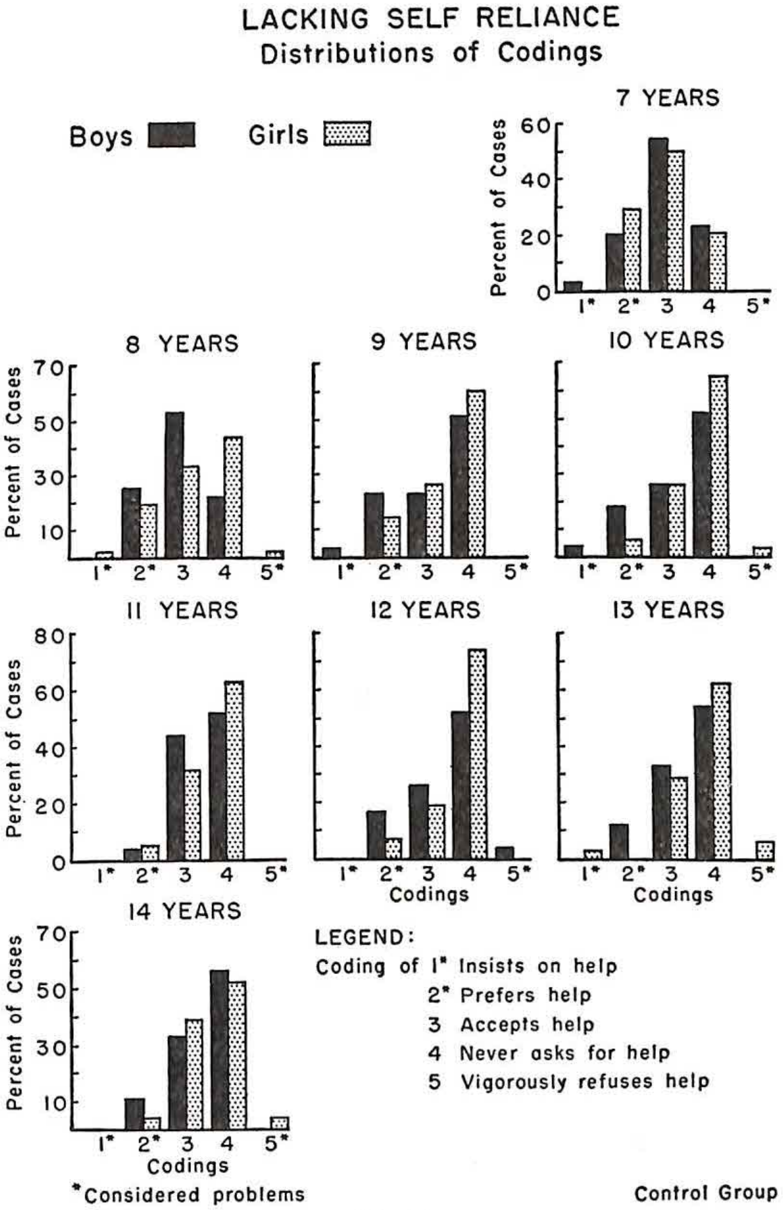

LACKING SELF RELIANCE
Distributions of Codings
Boys ■
Girls ▨
7 YEARS
8 YEARS
9 YEARS
10 YEARS
11 YEARS
12 YEARS
13 YEARS
14 YEARS
Percent of Cases
0
10
20
30
40
50
60
70
80
1* 2* 3 4 5*
Codings
LEGEND:
Coding of 1* Insists on help
2* Prefers help
3 Accepts help
4 Never asks for help
5 Vigorously refuses help
*Considered problems
Control Group

Fig. 24

RECORDING FORM

Name .... Interviewed by ....

Case No. .... Age .... Date ....

A. *Sleep*

1 2 3 4 5 Does he have dreams ....

1 2 3 4 5 Is he restless at night ....
Hours sleep at night

B. *Elimination*

1 2 3 4 5 Does he still wet his bed ....

1 2 3 4 5 Does he have any other accidents ....

C. *Eating*

1 2 3 4 5 Is his appetite good .... Does it vary ....

1 2 3 4 5 Has he any special food dislikes ....

D. *Sex attitudes*

1 2 3 4 5 Has he ever been so irritated that he handled himself ....

1 2 3 4 5 Is he ever self-conscious of his body ....

1 2 3 4 5 Has he shown any unusual interest in sex ....

E. *Motor Habits*

1 2 3 4 5 Any tics or spasms of muscles ....

1 2 3 4 5 Does he bite his nails ....

1 2 3 4 5 Does he suck his thumb now ....

1 2 3 4 5 Is enunciation good now .... What peculiarities ....

1 2 3 4 5 Do you consider him overactive ....

F. *Conduct*

1 2 3 4 5 Has he ever run away from home .... School ....

1 2 3 4 5 Does he tell protective lies .... Others ....

1 2 3 4 5 Does he ever take things of others ....

1 2 3 4 5 Is he destructive ....

1 2 3 4 5 Is he selfish ....

1 2 3 4 5 Is he quarrelsome .... With whom ....

G. *Personality*

1 2 3 4 5 Is he overdependent..

1 2 3 4 5 Does he try to do things for himself..

1 2 3 4 5 Is he shy..

1 2 3 4 5 Is he timid (physical situations)..

1 2 3 4 5 Is he afraid of anything........................ What..

1 2 3 4 5 Does he have tempers............ { 1 2 3 4 5 Severe..
1 2 3 4 5 Often..

1 2 3 4 5 Is he an irritable child..

1 2 3 4 5 Is he extremely resistive to orders or suggestions..

1 2 3 4 5 Does he appear jealous of anyone..

1 2 3 4 5 Does he fuss to receive attention..

1 2 3 4 5 Is he oversensitive..

1 2 3 4 5 Is he somber.. Gay..

1 2 3 4 5 Is he reserved............................ Spontaneous..

1 2 3 4 5 Does it upset him not to win..

H. *School*

1 2 3 4 5 Scholastic standing................ { Favorite subjects..
Hardest subjects..

1 2 3 4 5 Behavior in school..

1 2 3 4 5 Social adjustment in school..

1 2 3 4 5 Relation to teacher..

1 2 3 4 5 Attitude to Sunday School..

University of California, Institute of Child Welfare Form CG–17–0 (Dec. 1934)

TABLE 3

Percentage of Problem Incidence of Boys and Girls at Successive Ages

Problem	Sex	Age in years: 1¾	3	3½	4	5	6	7	8	9	10	11	12	13	14	Average (in per cent)
Sex		Number														
Boys		56	49	41	45	39	34	35	32	35	27	27	23	24	18	
Girls		60	49	47	49	52	49	48	43	43	34	38	42	34	23	
Problem	Sex	Per cent of problem incidence														
Sleep																
1. Disturbing dreams	B	16	29	22	24	20	24	26	22	29	33	26	9*	4	6	20.7
	G	13	29	28	22	29	35	23	23	28	47	42	26	15	4	26.0
2. Restlessness in sleep	B	38	18	5	2	8	12	11	9	14	22	22	13	0	11	13.2
	G	27	22	4	2	10	2	10	12	5	15	16	17	9	0	10.8
Elimination																
3. Diurnal enuresis	B	62*	6	2	0	3	0	0	0	0	0	0	0	0	0	5.2
	G	43	2	4	2	0	2	2	0	0	0	0	0	0	0	3.9
4. Nocturnal enuresis	B	75	18	17	13	8	9	17	12	11	11	15	9	8	11	16.7
	G	73	31	30	20	10	10	8	14	9	6	10	7	0	0	16.3
5. Soiling	B	32	4	0	0	3	0	0	0	0	0	0	0	0	0	2.8
	G	20	0	4	2	0	0	0	0	0	0	0	0	0	0	1.9
Eating																
7. Insufficient appetite	B	7	2	17	31	23	29	23	16	6	7	7	9	8	0	13.2
	G	10	6	17	29	31	37	19	21	9	9	13	14	0	0	15.4
9. Food finickiness	B	30	37	32	31	28	29*	17	12	6	4	11	17	4	6	18.9
	G	37	43	36	31	31	51	15	16	14	9	10	24	3	4	23.1

Sex																
11. Excessive modesty	B	0	8*	7*	16	20	12	6	22*	17	15	30	17	8	22	14.3
	G	5	22	26	24	25	16	12	5	16	26	13	21	18	17	17.6
12. Exhibitionism	B	0	0	0	0	0	0	0	0	0	0	0	0	0	0	....
	G	0	0	0	4	0	0	0	0	0	0	0	0	0	0	....
13. Masturbation	B	9	8	7	16	8	6	3	6	3	4	4	4	4	0	....
	G	8	4	6	8	6	2	4	2	0	0	0	0	0	0	....
14. Unusual sex interest	B	..	..	..	..	..	..	0	0	0	0	4	0	0	0	....
	G	..	..	..	..	..	..	0	0	0	0	0	0	3	0	....
Motor Habits																
15. Tics and mannerisms	B	0	0	5	4	5	3	11	3	3	0	4	0	0	0	2.7
	G	3	4	4	2	6	10	4	5	5	0	0	0	0	0	3.1
18. Nailbiting	B	5	8	7	9	8	12	23	16	20	18	30	22	33	33	17.4
	G	3	10	17	14	17	20	27	23	35	32	40	31	26	22	22.6
19. Thumbsucking	B	21	18	12	7**	5*	6	3	3	0	0	4	0	0	0	5.6
	G	33	35	28	27	19	16	12	12	5	6	3	2	0	0	14.1
20. Excessive activity	B	29	37	37	44	46	32	40	38*	34	26	30	26**	17*	11	31.9
	G	17	33	34	35	35	29	23	16	19	15	16	2	0	0	19.6
21. Speech problems	B	30	24	17	16	18	12	6	6	6	11	7	9	8	0	12.1
	G	17	18	17	10	8	8	6	12	9	3	5	5	0	4	8.7
Social standards																
22. Lying	B	0	14	37	33	49	53	26	41*	31	15	11*	9*	8	6	23.8
	G	0	12	36	49	42	49	12	19	21	12	0	0	0	0	18.0
22a. Truancy from home	B	0	2	7	9	10	6	0	0	0	0	0	0	0	0	2.4
	G	0	0	8	6	2	4	0	0	0	0	0	0	0	0	1.4
23. Stealing	B	7	12	10	11	10	6	9*	9	6	4	0	0	0	0	6.0
	G	3	18	2	6	4	0	0	5	0	0	0	0	0	0	2.7

* Sex differences significant at the 5 per cent level.

** Sex differences significant at the 1 per cent level.

TABLE 3—*Continued*

		Age in years														
		1¾	3	3½	4	5	6	7	8	9	10	11	12	13	14	Average (in per cent)
Sex		Number														
Boys		56	49	41	45	39	34	35	32	35	27	27	23	24	18	
Girls		60	49	47	49	52	49	48	43	43	34	38	42	34	23	
Problem	Sex	Per cent of problem incidence														
24. Destructiveness	B	14	20	10	20	28	24	17	22	11	11	7	4	0	0	13.4
	G	2	20	13	12	10	8	6	5	5	6	0	2	0	0	6.4
26. Selfishness in sharing	B	..	..	..	..	..	..	6	22	17	18	18	9	12*	0	12.8
	G	..	..	..	..	..	..	12	12	5	9	5	7	0	4	6.8
27. Quarrelsomeness	B	..	..	..	..	..	..	9	6	9	7	7	4	4	0	5.8
	G	..	..	..	..	..	..	2	5	2	12	5	7	3	0	4.5
Personality characteristics																
28. Excessive emotional dependence	B	21*	14	24	27	13	18	3**	3	11	15	11	13	4	11	13.4
	G	8	14	13	14	21	20	27	7	16	21	24	17	9	9	15.7
29. Excessive demanding of attention	B	20	20	24	27	10	9	11	22	23*	26	18**	13	8	0	16.5
	G	27	26	15	18	15	18	19	14	7	12	0	5	3	0	12.8
35. Oversensitiveness	B	9	29	34	42	46	32*	37	50	51	59	59	39	21	17	37.5
	G	18	31	47	51	52	53	50	49	46	38	45	48	41	52	44.4
36. Physical timidity	B	23	31	24	16	15*	18	26	16	23	30	26	4*	0	0	18.0
	G	25	24	38	24	35	31	23	30	30	24	21	21	12	13	25.1
36b. Shyness	B	..	..	..	..	..	..	9*	16	3**	18	15*	22	8	0	11.4
	G	..	..	..	..	..	..	25	21	21	24	37	21	18	26	24.1
37. Specific fears	B	30	43*	56	47	46	38	37	34	40	22	52	17	4*	6	33.7
	G	33	67	60	45	36	41	33	35	21	26	40	21	21	17	25.4

38. Mood swings	B	9	18	24	24	8	6*	..	..	..	37	41	22	33	22	22.2
	G	8	12	22	16	12	22	..	..	..	32	40	24	26	30	22.2
38a. Somberness	B	0	0	5	16	36	26	11	16	9*	18	30	26	12	6	15.1
	G	0	0	8	14	26	33	8	19	26	21	26	29	15	22	17.6
40. Negativism	B	18	29	42	20	33	26	11	19	11	22	22	9	17	11	20.7
	G	18	26	23	37	19	29	10	9	5	9	10	10	12	9	16.1
41. Irritability	B	16*	10	24	18	10	9	6	9	14	15	18	13	12	11	13.2
	G	3	8	17	24	4	16	4	7	5	12	13	10	9	4	9.7
42. Temper tantrums	B	59	69	66	53	59*	59	57	53*	51	44	44	39	33	22	50.6
	G	43	63	51	47	38	51	56	28	30	32	34	29	15	9	37.6
43. Jealousy	B	30	29	27	29	36	24	29	44	34	41	48*	44	33	22	33.6
	G	20	29	40	22	38	26	33	28	28	35	24	31	29	22	28.9
44. Excessive competitiveness	B	..	..	..	..	..	..	11	19	9	11	11*	4	0	0	8.1
	G	..	..	..	..	..	..	19	12	5	3	0	2	0	0	5.1
45. Excessive reserve	B	..	..	..	..	41	41	20*	19*	26	22**	52	39	25	17	30.2
	G	..	..	..	..	38	47	40	42	37	59	47	38	24	35	40.7
46. Unself-reliance	B	..	..	..	..	..	..	23	25	26	22	4	17	12	11	17.5
	G	..	..	..	..	..	..	29	21	14	6	5	7	3	4	11.1

* Sex differences significant at the 5 per cent level.
** Sex differences significant at the 1 per cent level.

TABLE 4

Problem Incidence Among First-born and Non-first-born Children

	Age in years												
	1¾	3	4	5	6	7	8	9	10	11	12	13	Average
Sib order	Number												
First-born boys	24	19	18	13	14	14	14	15	15	12	8	10	
Non-first-born boys	32	30	27	26	20	21	18	20	12	15	15	14	
First-born girls	28	24	27	27	26	24	24	25	18	20	21	17	
Non-first-born girls	32	25	22	25	23	24	19	18	16	18	21	17	
Problem, sib order, sex, and per cent of problem incidence													
Sleep													
1. Disturbing dreams													
First-born boys	8	42	39	23	36	36	29	47*	47	25	25*	10	30.6
Non-first-born boys	22	20	15	19	15	19	17	15	17	27	0	0	15.5
First-born girls	18	33	30	33	38	12	21	24	50	40	24	18	28.4
Non-first-born girls	9	24	14	24	30	33	26	33	44	44	29	12	26.8
2. Restlessness in sleep													
First-born boys	29	11	6	8	14	7	21*	13	27	25	38**	0	16.6
Non-first-born boys	44	23	0	8	10	14	0	15	17	20	0	0	12.6
First-born girls	32	29	4	11	4	8	21*	8	28*	20	33**	6	17.0
Non-first-born girls	22	16	0	8	0	12	0	0	0	11	0	12	6.8
Elimination													
3. Diurnal enuresis													
First-born boys	50	5	0	0	0	0	0	0	0	0	0	0	4.6
Non-first-born boys	72	7	0	4	0	0	0	0	0	0	0	0	6.9
First-born girls	43	4	4	0	4	4	0	0	0	0	0	0	4.9
Non-first-born girls	44	0	0	0	0	0	0	0	0	0	0	0	3.7

4. *Nocturnal enuresis*													
First-born boys	71	11	11	8	7	21	21	7	7	17	0	0	15.1
Non-first-born boys	78	23	15	8	10	14	6	15	17	13	13	14	18.8
First-born girls	71	38	26	7	12	8	8	8	11	15	10	0	17.8
Non-first-born girls	75	24	14	12	9	8	21	11	0	6	5	0	15.4
Eating													
7. Insufficient appetite													
First-born boys	4	0	22	23	36	7	7	0	0	8	0	10	9.8
Non-first-born boys	9	3	37	23	25	33	22	10	17	7	13	7	17.2
First-born girls	7	4	33	26	42	21	21	8	11	20	14	0	7.2
Non-first-born girls	12	8	23	36	30	17	21	11	6	6	14	0	15.3
9. Food finickiness													
First-born boys	21	26	33	15	14	0*	0	0	0	8	12	0	10.8
Non-first-born boys	38	43	30	35	40	29	22	10	8	13	20	7	24.6
First-born girls	43	46	26	26	42	12	17	20	17	10	29	6	24.5
Non-first-born girls	31	40	36	36	61	17	16	6	0	11	19	0	22.8
Sex													
11. Excessive modesty													
First-born boys	0	11	6	8	14	14	21	20	13	25	12	0	12.0
Non-first-born boys	0	7	22	27	10	0	22	15	17	33	20	14	15.6
First-born girls	4	17	30	26	19	12	8	12	22	15	24	18	17.2
Non-first born girls	6	28	18	24	13	12	0	22	31	11	19	18	16.8
12. Exhibitionism													
First-born boys	0	0	0	0	0	0	0	0	0	0	0	0	....
Non-first-born boys	0	0	0	0	0	0	0	0	0	0	0	0	....
First-born girls	0	0	7	0	0	0	0	0	0	0	0	0	....
Non-first-born girls	0	0	0	0	0	0	0	0	0	0	0	0	....
13. Masturbation													
First-born boys	8	16	22	8	7	7	7	0	0	0	0	0	....
Non-first-born boys	9	3	11	8	5	0	6	5	8	7	7	7	....
First-born girls	11	8	11	4	4	4	4	0	0	0	0	0	....
Non-first-born girls	6	0	5	8	0	4	0	0	0	0	0	0	....

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* Differences in incidence between first and non-first children significant at the 5 per cent level.

** Differences in incidence between first and non-first children significant at the 1 per cent level.

TABLE 4—*Continued*

	Age in years												
	1¾	3	4	5	6	7	8	9	10	11	12	13	Average
Sib order	Number												
First-born boys	24	19	18	13	14	14	14	15	15	12	8	10	
Non-first-born boys	32	30	27	26	20	21	18	20	12	15	15	14	
First-born girls	28	24	27	27	26	24	24	25	18	20	21	17	
Non-first-born girls	32	25	22	25	23	24	19	18	16	18	21	17	
Problem, sib order, sex, and per cent of problem incidence													
Sex—*Continued*													
14. Unusual sex interest													
First-born boys	..	..	..	..	..	0	0	0	0	0	0	0	....
Non-first-born boys	..	..	..	..	..	0	0	0	0	7	0	0	....
First-born girls	..	..	..	..	..	0	0	0	0	0	0	6	....
Non-first-born girls	..	..	..	..	..	0	0	0	0	0	0	0	....
Motor habits													
15. Tics and mannerisms													
First-born boys	0	0	6	0	0	14	7	0	0	0	0	0	2.2
Non-first-born boys	0	0	4	8	5	10	0	5	0	7	0	0	3.2
First-born girls	0	4	4	7	19*	8	8	4	0	0	0	0	4.5
Non-first-born girls	6	4	0	4	0	0	0	6	0	0	0	0	1.7
18. Nailbiting													
First-born boys	4	5	11	8	21	29	7	13	13	33	12	30	15.5
Non-first-born boys	6	10	7	8	5	19	22	25	25	27	27	36	18.1
First-born girls	7	8	22	26	27	33	33	48	39	40	43	29	29.6
Non-first-born girls	0	12	5	8	13	21	11	17	25	39	19	24	16.2
19. Thumbsucking													
First-born boys	21	11	6	8	0	0	0	0	0	8	0	0	4.5
Non-first-born boys	22	23	7	4	10	5	6	0	0	0	0	0	6.4
First-born girls	32	25	22	19	12	4	4	4	0	0	0	0	10.2
Non-first-born girls	38	44	32	20	22	21	21	6	12	6	5	0	18.9

20. *Overactivity*													
First-born boys	33	37	50	31	29	36	21	33	20	8*	25	10	27.8
Non-first-born boys	25	37	41	54	35	43	50	35	33	47	27	21	37.3
First-born girls	14	38	37	52**	46**	25	21	16	17	15	5	0	23.8
Non-first-born girls	19	28	36	16	9	21	11	22	12	17	0	0	15.9
21. Speech problems													
First-born boys	17	11	6	8	0	7	0	0	0*	0	0	0	4.1
Non-first-born boys	41	33	22	23	20	5	11	15	25	13	13	14	19.6
First-born girls	14	21	15	7	15	12	17	12	6	10	10	0	11.6
Non-first-born girls	19	16	5	8	0	0	5	6	0	0	0	0	4.9
Social standards													
22. Lying													
First-born boys	0	11	22	69	43	21	36	33	13	0	0	10	21.5
Non-first-born boys	0	17	41	38	60	29	44	30	17	20	13	7	26.3
First-born girls	0	12	44	48	46	8	17	32*	17	0	0	0	18.7
Non-first-born girls	0	12	55	36	52	17	21	6	6	0	0	0	17.1
22a. Truancy from home													
First-born boys	0	0	6	0	14	0	0	0	0	0	0	0	1.7
Non-first-born boys	0	3	11	15	0	0	0	0	0	0	0	0	2.4
First-born girls	0	0	7	4	4	0	0	0	0	0	0	0	1.2
Non-first-born girls	0	0	5	0	4	0	0	0	0	0	0	0	0.7
23. Stealing													
First-born boys	0	16	6	8	0	14	0	0	0	0	0	0	3.7
Non-first-born boys	12	10	15	12	10	5	17	10	8	0	0	0	8.2
First-born girls	4	17	7	4	0	0	0	0	0	0	0	0	2.7
Non-first-born girls	3	20	5	4	0	0	11	0	0	0	0	0	3.6
24. Destructiveness													
First-born boys	4	16	6*	23	21	7	21	20	13	0	12	0	11.9
Non-first-born boys	22	23	30	31	25	24	22	5	8	13	0	0	16.9
First-born girls	4	25	15	7	12	12	8	8	11	0	5	0	8.9
Non-first-born girls	0	16	9	12	4	0	0	0	0	0	0	0	3.4

* Differences in incidence between first and non-first children significant at the 5 per cent level.
** Differences in incidence between first and non-first children significant at the 1 per cent level.

TABLE 4—*Continued*

	Age in years												
	1¾	3	4	5	6	7	8	9	10	11	12	13	Average
Sib order	Number												
First-born boys	24	19	18	13	14	14	14	15	15	12	8	10	
Non-first-born boys	32	30	27	26	20	21	18	20	12	15	15	14	
First-born girls	28	24	27	27	26	24	24	25	18	20	21	17	
Non-first-born girls	32	25	22	25	23	24	19	18	16	18	21	17	
Problem, sib order, sex, and per cent of problem incidence													
Social standards—*Continued*													
26. Selfishness in sharing													
First-born boys	..	..	..	..	..	14	21	27	13	8	0	0	11.9
Non-first-born boys	..	..	..	..	..	0	22	10	25	27	13	21	18.3
First-born girls	..	..	..	..	..	17	17	4	11	10	14	0	10.4
Non-first-born girls	..	..	..	..	..	8	5	6	6	0	0	0	3.6
27. Quarrelsomeness													
First-born boys	..	..	..	..	..	7	0	13	7	0	0	0	3.9
Non-first-born boys	..	..	..	..	..	10	11	5	8	13	7	7	8.7
First-born girls	..	..	..	..	..	4	8	4	17	10	14	0	8.2
Non-first-born girls	..	..	..	..	..	0	0	0	6	0	0	6	1.7
Personality characteristics													
28. Excessive emotional dependence													
First-born boys	17	16	17	8	14	7	7	13	7	8	0	0	9.5
Non-first-born boys	25	13	33	15	20	0	0	10	25	13	20	7	15.1
First-born girls	7	17	15	26	27	38	12	16	28	35	24	12	21.4
Non-first-born girls	9	12	14	16	13	17	0	17	12	11	10	6	11.4
29. Excessive demanding of attention													
First-born boys	21	26	17	23	0	7	29	40*	27	17	25	10	20.2
Non-first-born boys	19	17	33	4	15	14	17	10	25	20	7	7	15.7
First-born girls	36	42*	22	22	27	25	25*	12	11	0	10	6	19.8
Non-first-born girls	19	12	14	8	9	12	0	0	12	0	0	0	7.2

35. *Oversensitiveness*													
First-born boys	21	32	33	46	36	57*	57	67	60	67	38	20	44.5
Non-first-born boys	0	27	48	46	30	24	44	40	58	53	40	21	35.9
First-born girls	18	21	37*	56	50	50	50	40	33	50	48	29	40.2
Non-first-born girls	16	40	68	48	57	50	47	56	44	39	48	53	47.2
36. Physical timidity													
First-born boys	21	32	11	8	21	36	29	47**	33	33	0	0	22.6
Non-first-born boys	25	30	19	19	15	19	6	5	25	20	7	0	15.8
First-born girls	18	33	19	37	35	25	29	28	22	35*	19	6	25.5
Non-first-born girls	31	16	32	32	26	21	32	33	25	6	24	18	24.7
36b. Shyness													
First-born boys	..	..	..	..	..	14	7	0	7	0	12	0	5.7
Non-first-born boys	..	..	..	..	..	5	22	5	33	27	27	14	19.0
First-born girls	..	..	..	..	..	42**	25	28	33	55*	24	24	33.0
Non-first-born girls	..	..	..	..	..	8	16	11	12	17	19	12	13.6
37. Specific fears													
First-born boys	29	47	50	38	50	43	29	47	27	58	12	10	36.7
Non-first-born boys	31	40	44	50	30	33	39	35	17	47	20	0	32.2
First-born girls	18*	67	44	41	46	42	46	20	28	50	19	24	37.1
Non-first-born girls	47	68	45	32	35	25	21	22	25	28	24	18	32.5
38. Mood swings													
First-born boys	4	21	22	15	0	0	..	0	47	42	25	40	24.0
Non-first-born boys	12	17	26	4	10	0	..	0	25	40	20	29	20.3
First-born girls	4	21	22	19	27	0	..	0	44	65**	38*	24	29.3
Non-first-born girls	12	4	9	4	17	0	..	0	19	11	10	29	12.8
38a. Somberness													
First-born boys	0	0	11	46	21	7	7	13	7	25	12	0	15.3
Non-first-born boys	0	0	19	31	30	14	22	5	33	33	33	21	24.7
First-born girl	0	0	11	30	27	12	29*	40*	33	40*	33	18	29.1
Non-first-born girls	0	0	18	24	39	4	5	6	6	11	24	12	14.6

* Differences in incidence between first and non-first children significant at the 5 per cent level.
** Differences in incidence between first and non-first children significant at the 1 per cent level.

TABLE 4—*Concluded*

	Age in years												
	1¾	3	4	5	6	7	8	9	10	11	12	13	Average
Sib order	Number												
First-born boys	24	19	18	13	14	14	14	15	15	12	8	10	
Non-first-born boys	32	30	27	26	20	21	18	20	12	15	15	14	
First-born girls	28	24	27	27	26	24	24	25	18	20	21	17	
Non-first-born girls	32	25	22	25	23	24	19	18	16	18	21	17	
Problem, sib order, sex, and per cent of problem incidence													
Personality characteristics—*Continued*													
40. Negativism													
First-born boys	12	21	17	31	21	14	21	13	20	17	0	10	16.4
Non-first-born boys	22	33	22	35	30	10	17	10	25	27	13	21	22.1
First-born girls	21	33	44	15	31	17	17	8	11	20*	19*	12	20.7
Non-first-born girls	19	20	27	24	26	4	0	0	6	0	0	12	11.5
41. Irritability													
First-born boys	4*	16	11	8	7	7	7	20	13	8	12	10	10.2
Non-first-born boys	25	7	22	12	10	5	11	10	17	27	13	14	14.4
First-born girls	7	12	33	7	27*	8	12	8	17	25*	14	12	15.2
Non-first-born girls	0	4	14	0	4	0	0	0	6	0	5	6	3.2
42. Temper tantrums													
First-born boys	62	74	50	69	43	50	43	47	33	42	38	10*	46.8
Non-first-born boys	56	67	56	54	70	62	61	55	58	47	40	50	56.3
First-born girls	39	75	48	44	50	67	42*	40	28	50*	38	18	44.9
Non-first-born girls	47	52	45	32	52	46	11	17	38	17	19	12	32.3
43. Jealousy													
First-born boys	4**	37	22	46	29	36	43	40	47	42	38	30	34.5
Non-first-born boys	50	23	33	31	20	24	44	30	33	53	47	43	35.9
First-born girls	11	38	26	44	31	46	33	24	39	30	38	35	32.9
Non-first-born girls	28	20	18	32	22	21	21	33	31	17	24	24	24.2

44. *Excessive competitiveness*													
First-born boys	..	..	..	..	..	0	0*	13	13	0	12	0	5.4
Non-first-born boys	..	..	..	..	..	19	33	5	8	20	0	0	12.2
First-born girls	..	..	..	..	..	21	12	4	0	0	5	0	6.0
Non-first-born girls	..	..	..	..	..	17	11	6	6	0	0	0	5.7
46. Unself-reliance													
First-born boys	..	..	..	..	..	36	29	20	13	0	12	10	17.2
Non-first-born boys	..	..	..	..	..	14	22	30	33	7	20	14	20.0
First-born girls	..	..	..	..	..	29	29	12	11	10	14	6	15.8
Non-first-born girls	..	..	..	..	..	29	11	17	0	0	0	0	8.1
45. Excessive reserve													
First-born boys	..	..	..	62	36	14	14	40	13	50	25	30	31.6
Non-first-born boys	..	..	..	31	45	24	22	15	33	53	47	21	32.3
First-born girls	..	..	..	30	46	46	46	52*	61	50	43	24	44.2
Non-first-born girls	..	..	..	48	48	33	37	17	56	44	33	24	37.8

* Differences in incidence between first and non-first children significant at the 5 per cent level.

** Differences in incidence between first and non-first children significant at the 1 per cent level.

III. INDIVIDUAL PROBLEMS ASSOCIATED WITH THE ESTABLISHMENT OF BIOLOGICAL FUNCTIONING AND CONTROL

IN CHAPTERS iii, iv, v, and vi, individual problems will be considered. For each problem the following will be presented where the data warrant it:

1. Summary graphs of frequencies through time by age and sex.
2. Discussion of age trends, sex differences, birth-order differences, relationships to other problems; and, for age levels at which measures are available, relationships to the child's health and I.Q., and characteristics of the mother.
3. A brief summary will be given of a child or two high in the persistence of the problem under consideration.

This chapter will summarize the materials associated with biological functions and controls. Chapter iv will deal with various motor manifestations; chapter v with problems associated with social standards; and chapter vi with personality problems.

A word should be said about the statistical treatment of the data. A Pearsonian r was the method of correlation used whenever the scoring and distributions justified its use; no corrections were made for broad categories. In those instances where a presence-or-absence scoring was all that was available in one variable, biserial r was the statistic used, and if both variables were so scored, a tetrachoric r was computed. If any method of correlation other than a Pearsonian r has been the method of determining the relationship, the correlations are so designated, for example, r_{bis} or r_t or Rho.

SLEEPING HABITS

DISTURBING DREAMS

Disturbing dreams showed no consistent age trends. There was a 3-year peak for both boys and girls of 29 per cent, a 6-year peak for girls of 35 per cent, and a 10-year peak for both groups. The 10-year peak was the highest level reached for both sexes, 47 per cent of the girls and 33 per cent of the boys. The average through age score was higher for girls (26.0 per cent) than the average for boys (20.7 per cent).

At ten out of twelve age periods, more first-born boys showed disturbing dreams than non-first, the greatest differences being at years 9

(47 per cent to 15 per cent) and 10 (47 per cent to 17 per cent). The average per cent occurrence for the twelve periods was for first-born boys 30.6, and for the non-first-born, 15.5. As will be pointed out in detail in chapter ix, the first-born boys did more internalizing and the non-first-born, more acting-out behavior. There was no significant difference between first-born girls and non-first-borns in disturbing dreams, the average of the twelve periods showing 28.4 per cent for first-born girls and 26.8 per cent for non-first-borns.

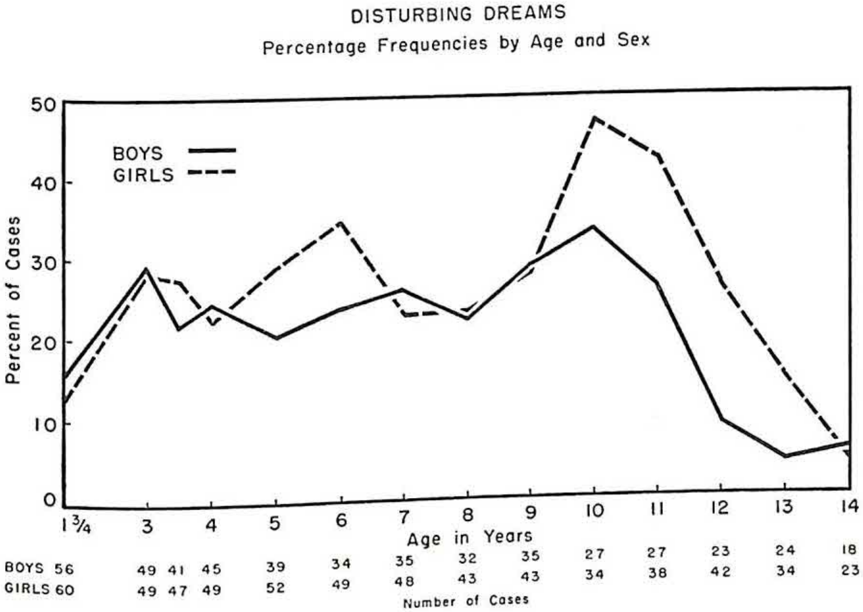


Fig. 25

The high-scoring boy, that is, the boy for whom disturbing dreams were most frequently reported, was a first-born with a younger brother. He had six other persistent problems. A problem was labeled persistent if reported by the mother as present on 50 per cent or more of her clinic visits. There were fourteen reports on this boy, and all but two of them recorded disturbing dreams. These dreams were occurring well before the arrival of the brother who, it is true, became prominent in them later. This boy's second and third most persistent problems were in *temper tantrums* and *jealousy*. He was not easy on himself or his parents.

The girl high on disturbing dreams was an only child. There were twelve reports on her, and all but one showed both distributing dreams and *specific fears*. There was considerable parental disagreement in this household resulting in insecurity for this girl.

Disturbing dreams had highest correlations, quite reasonably, with restless sleep ($r_t = .90$ for boys, .84 for girls at year 3). Disturbing dreams were significantly correlated with *temper tantrums* at 21 months ($r_t = .54$) for boys; the r_t of .47 for girls was not significant nor did the correlations at 3 years or 5 years reach adequate significance levels for either boys or girls. Disturbing dreams were related to poor nutritional or physiological conditions in boys at age 3. They also showed a significant relationship with I.Q. ($r_{bis} = .50$) for girls at 3 years, which probably meant that children had to be verbal to get both high intelligence scores and to be able to report their dreams.

At age 12 for boys the highest correlates for disturbing dreams were physiological or tensional *irritability* ($r = .60$, significant at the 1 per cent level), *restless sleep* ($r = .52$, 5 per cent level) and *tempers* ($r = .41$, 5 per cent level) and *mood swings* showed a correlation of .38, but below an adequate probability level. For girls, only one correlation reached the 5 per cent level, namely, *overdependence* (–.31). This means that the more independent girls were now having more disturbing dreams. The girls also no longer showed correlates between disturbing dreams and *tempers* and *negativism*. This perhaps means that the girls by 12 years were not solving problems (which showed up in *dreams*) in the overt fashion that they had earlier and that the boys still did at 12.

In summary, this method of internalized problem solving showed much higher frequencies at later years than at earlier years when little internalizing occurred. It was somewhat higher for girls than for boys who were permitted more aggressive overt behavior. It was higher for first-born boys than for non-firsts, the first-borns showing more internalizing behavior in other ways, too, than did the non-firsts. Disturbing dreams were related to poor nutritional status at age 3. The early relationship of dreams to *tempers* (and *negativism*) in boys may mean no more than first overt behavior, then resistance, and then internalization, were being tried out somewhat indiscriminately in the search for tension-reducing devices. The boys were still using both dreams and *tempers* at age 12, the girls were not.

RESTLESSNESS IN SLEEP

Restless sleep showed no clear age trends. It had its highest frequency for both sexes at 21 months: boys, 38 per cent; girls, 27 per cent. There was a drop to 2 per cent at 4 years by both groups and a rise by both groups at 10 to 12 years, the boys to 22 per cent and the girls to 17 per cent. The total boy score is slightly but insignificantly (13.2 per cent to 10.8 per cent) greater than the total girl score.

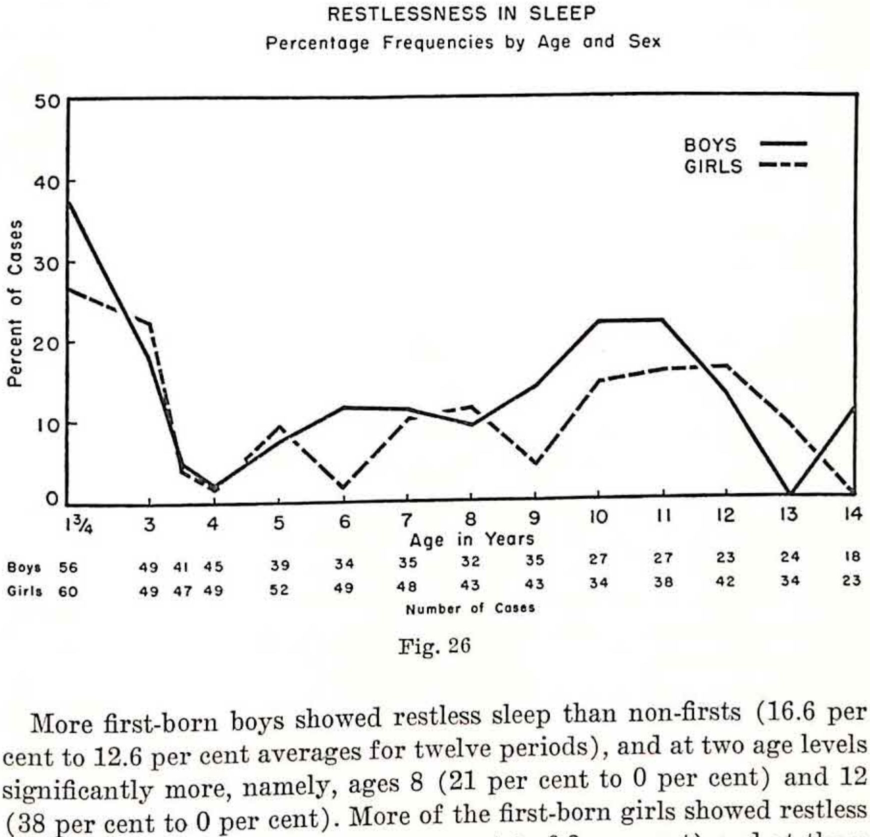


Fig. 26

More first-born boys showed restless sleep than non-firsts (16.6 per cent to 12.6 per cent averages for twelve periods), and at two age levels significantly more, namely, ages 8 (21 per cent to 0 per cent) and 12 (38 per cent to 0 per cent). More of the first-born girls showed restless sleep than non-first-borns (17.0 per cent to 6.8 per cent) and at three age periods, 8, 10, and 12, significantly more (21 per cent to 0, 28 per cent to 0, and 33 per cent to 0); no non-firsts showed restless sleep at these ages.

The high boy for this behavior with a score of 50 per cent (restlessness in sleep reported at half of his visits) was the one who also led in *disturbing dreams*.

The high girl with a score of 45 per cent was a first-born with eleven reports, whose other highest scores were in *excessive reserve, mood swings*, and *shyness*.

With respect to persistency, the interage correlation between 7 and 14 years was .08, and no consistent interage correlations occurred for either 3- or 5-year age spans, none being higher than .32.

The highest behavior correlates of restless sleep were *disturbing dreams* at 21 months ($r_t = .95$ for girls); at 3 years (.90 for boys and .84 for girls). Additionally for the boys, *negativism* ($r_t = .52$), *soiling* ($r_t = .50$), *speech difficulties* ($r_t = .47$ for boys and $-.42$ for girls), and *tempers* ($r_t = .43$) were associated with restless sleep at 21 months. At 12 years the boys showed only two correlates with restless sleep, namely *disturbing dreams* ($r = .52$, 5 per cent level) and absence of *speech problems* ($r = -.48$). Although *tempers* correlated .32 with *restless sleep,* this was below the adequate significance level. For the girls, *timidity* at 21 months ($r_t = .63$) and for *excessive dependence* at age 3 ($r_t = .63$). Also for girls there was a negative correlation between restless sleep and *enuresis* ($r_t = -.50$) meaning that either the girls who slept soundly wet their beds or that the strain of not wetting their beds made their sleep uneasy. After age 3 no significant relationship to other problems was obtained. At age 12 in girls, restless sleep was not significantly related to *disturbing dreams* ($r = .15$) which may have meant they weren't having dreams disturbing enough to awaken them, or that they didn't report them or repressed them.

In summary, there were no consistent age trends, although the highest frequency of restless sleep was at 21 months, there were no significant sex differences and it was a nonpersistent pattern for both sexes. First-born boys and girls showed more than non-first-borns. Associated problems were *disturbing dreams* for both boys and girls in the early years and for boys at age 12; and at 21 months for boys, *negativism, tempers,* and *speech difficulties.* For the girls in the early ages, *timidity, excessive dependence,* and the *absence of enuresis* were found associated with restless sleep, and later *attention demanding, irritability, mood swings,* and *tempers.* However, girls at age 12 did show behavioral correlates with restless sleep, namely with *excessive attention demanding* ($r = .48$, 1 per cent level), *irritability* ($r = .40$, 1 per cent level), *mood swings* ($r = .36$, 5 per cent level), and *tempers* ($r = .32$, 5 per cent level). This last correlation of .32 is identical with that of the boys for whom a smaller "N" precluded an adequate significance level.

ELIMINATION HABITS

The order of establishment of elimination controls were: first, bowel control; second, daytime bladder control; and third, nighttime bladder control. At 21 months, only 32 per cent of the boys were still soiling, whereas 62 per cent of them were still wetting their clothes and 75 per cent were wetting their beds. At 21 months, 20 per cent of the girls were still soiling, 43 per cent still wetting their clothes, and 73 per cent still wetting their beds. Soiling was eliminated first, probably because bowel movements occurring but once or twice per twenty-four hours were easier to watch for and control, whereas urinations were more frequent. Further, daytime bladder control was easier to check than night-time control when both the child and the parents were asleep. In connection with this point, in the intensively studied group more recruits for nocturnal enuresis came from harmonious marital adjustments than from disharmonious ones, whereas more diurnal enuresis came from inharmonious homes.

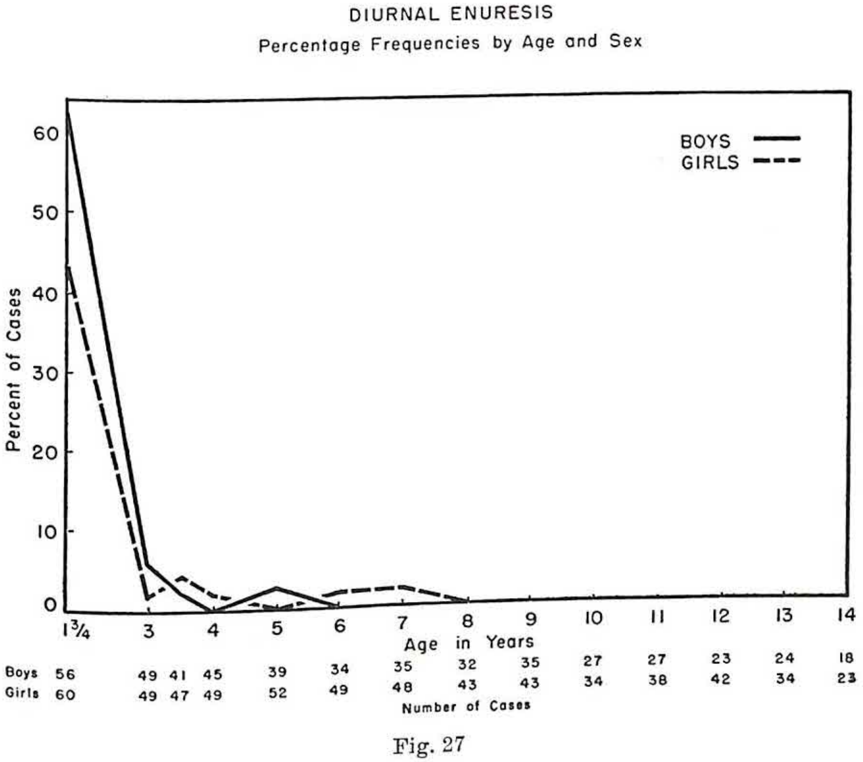


Fig. 27

DIURNAL ENURESIS

At 21 months, diurnal enuresis was highly related to *soiling* ($r_t = .63$ for boys, .81 for girls) but not to *nocturnal enuresis;* and in boys to *food finickiness* ($r_t = .60$). It was so low in frequency that correlations could not be secured for the later age levels. In our intensive group it was found to be related to a straining marital adjustment.

Diurnal enuresis has its highest frequency at 21 months when boys show 62 per cent, and girls show 43 per cent. Daytime control was established by the boys by 3½ years (one exception) and by the girls at 4 years (one exception).

Diurnal enuresis occurred with too low a frequency to compare first- and non-first-born save at the 21-month level when 50 per cent of the first-born boys were reported as having this problem and 72 per cent of the non-first-born boys. The first- and non-first-born girls showed no significant differences.

Diurnal enuresis was related to *soiling,* another training problem, at 21 months and, in boys, to *food finickiness.* After 21 months, frequencies are too low to relate to other problems.

NOCTURNAL ENURESIS

Noctural enuresis showed a definite drop in frequency with age. At 21 months: boys show 75 per cent, girls 73 per cent; at 3 years, boys 18 per cent and girls, 31 per cent. The boys show a slight rise at 7 years. At 11 years a slight rise occurred when the four most enuretic boys reported, and the three chronics among the girls were joined, at this age level only, by an early maturing overweight girl who had a recurrence of enuresis at this age. At 18 years, one of the girls entered college and one of the boys entered the Army still dogged by this problem. (See fig. 28.)

Nocturnal enuresis was more frequent among non-first-born boys (average per cent 18.8) than among first-born boys (average per cent 15.1) although at no age are the differences significant. Similarly for the girls, the differences are not significant although the first-borns on the average led (17.8 per cent to 15.4 per cent).

Nocturnal enuresis was significantly related in girls at 21 months to *thumbsucking* and negatively related to *restless sleep,* this latter meaning that it was the sound sleeper who wet the bed. Because of low frequencies, at no other age for this group did we find significant problem relationships. Low negative correlations with intelligence were the rule, significantly so for the boys at age 3 ($r_{\text{bis}} = -.44$) at the 1 per cent level of confidence. In the intensive group, it was found that the long continued enuretic patterns occurred most often in boys who were slow maturing, both physically and intellectually, and whose training by energetic mothers was started too early, maturationally, to be followed by success, and was accompanied by anxious and hostile dependence. The long continued enuretic girls, fewer in number, were found to be early maturers, who had tomboy interests, and a poor relationship to an unstable father (unpublished MS.).

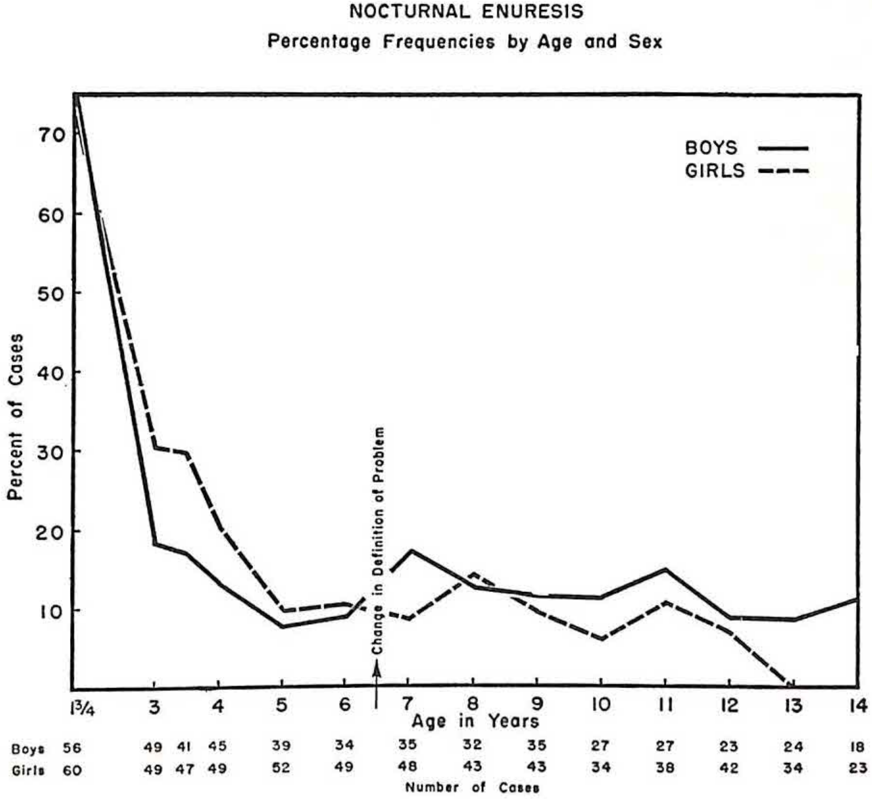


Fig. 28

SOILING

Soiling showed a rapid decline with age. At 21 months the percentages of occurrence were for boys, 32 per cent, and for girls, 20 per cent; at 3 years there were no girls and only two boys with the problem. At 21 months, the non-first-born boys and the first-born girls led in this problem. (See fig. 29.)

After 21 months, soiling was occurring too infrequently to make adequate first- and non-first-born comparisons or to compute correlations with other problems. Soiling showed significant correlations (1 per cent level) to daytime enuresis at 21 months for both boys ($r_t = .63$) and girls ($r_t = .81$) and for boys at the 5 per cent level with *insufficient appetite* ($r_t = .57$), *restless sleep* ($r_t = .50$), *masturbation* ($r_t = .62$), and *poor enunciation* ($r_t = .47$).

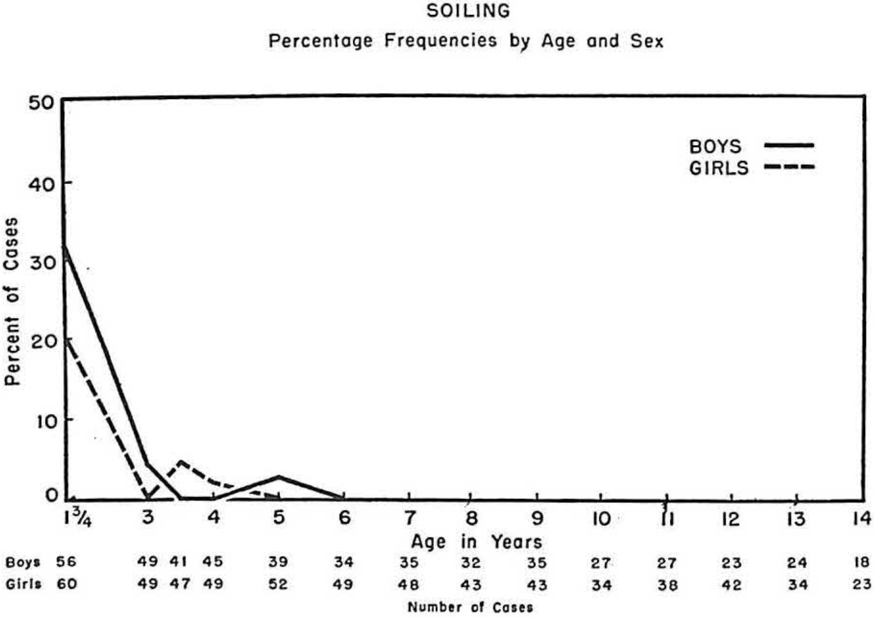

SOILING
Percentage Frequencies by Age and Sex

Fig. 29

EATING HABITS

INSUFFICIENT APPETITE

Insufficient appetite shows a rise in frequency from 21 months when poor appetite was rare (7 per cent boys, 10 per cent girls) to a peak for boys at 4 years (31 per cent) and then subsiding after 6 years. For girls, the highest frequencies were at ages 4 (29 per cent), 5 (31 per cent), and 6 (37 per cent). These early years were also the years of highest frequency of communicable diseases. The girls also showed a mild rise in insufficient appetite at years 11 and 12.

The non-first-born boys led on the average (17.2 per cent to 9.8 per cent for first-born boys) but at no age level were the differences significant. The non-first-born girls led (15.3 per cent to 7.2 per cent for first-borns) but at no ages were the differences significant.

The top boy, 100 per cent, who was reported as a poor eater on all of his ten annual visits was a non-first-born. This was his highest problem frequency but he built up a record of twelve other problems with scores of 50 per cent or more. His parents were large people who loved food and may have overestimated what he should eat. He was the baby of the family and made the most of that situation.

INSUFFICIENT APPETITE
Percentage Frequencies by Age and Sex

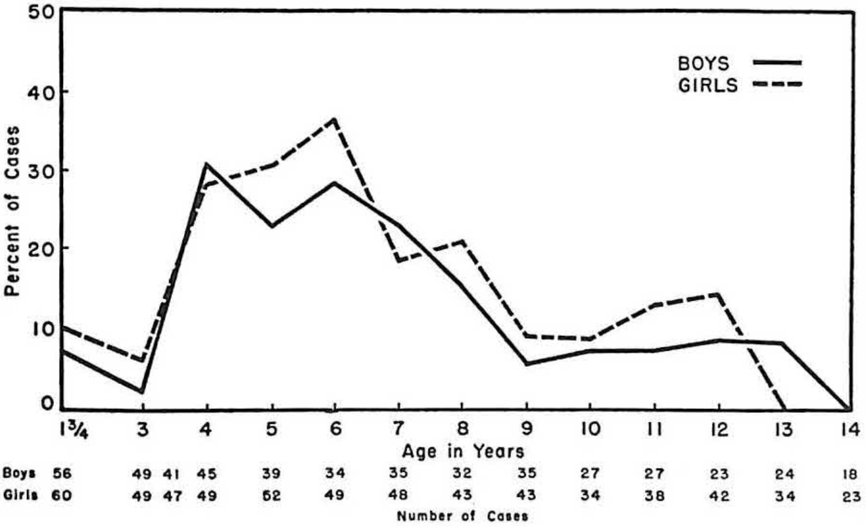


Fig. 30

The top girl, for whom poor appetite was listed on 67 per cent of her reports, was a first-born, premature, small-boned, late-maturing girl, with a younger brother. She had twelve reports and 100 per cent record of *temper tantrums*.

At 21 months, insufficient appetite is significantly related in girls to *severity of illness* ($r_{\text{bis}} = .63$), and at 5 years to poor *nutritional status* ($r = .37$). It is not surprising, therefore, that it is among the least persistent of reported problems since in our group illness was largely episodic.

The interage correlations for degree of appetite between ages 5 and 14 was .04, between 7 and 14, –.07, and between 11 and 14, .06, although for adjacent age levels correlations ranged from .45 to .71. Both boys and girls showed higher correlations between 8 and 13 years (.41 and

.53) than between the shorter period of 8 to 11 years (.25 and .27).

Insufficient appetite showed a significant relationship in boys to *soiling* at 21 months; frequencies were too low at 3 years to compute relationships. In the intensive study significant relationships were found between insufficient appetite and *food finickiness* ($r_t = .58$), *negativism* ($r_t = .56$), and *attention demanding* ($r_t = .64$) in boys, and *overdependence* ($r_t = .60$) in girls.

At age 5, the following was found: boys showed no significant correlations with poor appetite, whereas girls showed five at the 1 per cent level of confidence, namely, *somberness* ($r = .55$), *excessive reserve* ($r = .47$), *mood swings* ($r = .47$), *irritability* ($\mathrm{r} = .46$), and *temper tantrums* ($r = .40$); and two at the 5 per cent level of confidence, namely, *specific fears* ($r = .31$) and *overdependence* ($r = .27$).

At 12 years, these sex differences were reversed. More significant relationships were found for the boys between insufficient appetite and other problems than was true for the girls. The highest correlation for the boys was between insufficient appetite and *food finickiness* ($r = .58$), *attention demanding* ($r = .50$), *lying* ($r = .49$), and *jealousy* ($r = .47$). The two significant correlations for the girls were *finickiness* ($r = .38$) and tempers ($r = .37$). Discussion of these age-sex reversals with respect to the behavioral correlates of insufficient appetite will be deferred until the data on age-sex differences in *food finickiness* are presented in the following pages.

In summary, insufficient appetite shows its highest frequencies at the peak ages of communicable diseases in the children, shows no sex differences in percentage frequencies, and was found to be nonpersistent for the group. It was related in the early ages in girls to *illness* and *poor nutritional* status. At age 5 (the one age level on which data were available to this report), it is associated with silent critical mothers who were worried and fussy about the child's eating habits. It is reported more often (although not significantly so at any age level) for non-first-born children, which may be because of the limitations of small frequencies or may very well indicate a coping device of minor proportions. With respect to its age-sex correlates with other behavior, it showed interesting reversals. At age 5, no correlates with other behaviors occur with reported insufficient appetite in the boys, whereas seven occur in the girls—*somberness, reserve, moodiness, irritability, tempers, fears,* and *overdependence*. But at age 12, four substantial correlates appear for the boys—*food finickiness, attention demanding, lying,* and *jealousy,* and only two of lesser magnitude for the girls—*food finickiness* and *tempers*. We will speculate about the meaning of these age-sex differences in the following section.

FOOD FINICKINESS

Food finickiness was high in frequency in the early years, dropped down at years 7, 8, and 9, and climbed somewhat at 12 years for both boys and girls. The highest peak for the girls was at age 6 (51 per cent) and for the boys, age 3 (37 per cent). The average percentage frequency over the age span was somewhat higher for the girls (23.1 per cent) than for the boys (18.9 per cent). At only age 6 were differences significant between the boys (29 per cent) and girls (51 per cent).

At all but one age level the *non-first-born boys* led by small and nonsignificant degrees save at year 7 where 29 per cent of the non-first and none of the first-born boys were finicky eaters. The first-born boys seemed to have little need to use this as a weapon of resistance or control. The average of the per cents was 10.8 (first-born boys) and 24.6 (non-first-born). The first- and non-first girls showed no significant differences. Their average per cents for the twelve age periods were 24.5 and 22.8, respectively.

Persistency figures (computed for 7 years on, since it was not coded before then) showed finickiness to be in the middle third of eighteen problems in persistency as shown by the 7- to 14-year correlations ($r = .24$), whereas *insufficient appetite* was among the least persistent problems. The interage correlations for 3-year periods ranged from .25 to .36, showing relatively low persistence in the same children at the different ages. The 8- to 11-year periods showed lower interage correlations for both boys (.36) and girls (.02) than the longer 8- to 13-year period ($r = .52$ for boys and .22 for girls).

Food finickiness is not related to *nutritional status* and *illness ratings,* in contrast to *poor appetite* which had significant correlations with nutritional status for girls at age 5. The relationship of *food finickiness* to mothers' characteristics was not obtained.

Food finickiness at 21 months showed significant relationships to *diurnal enuresis* ($r_t = .60$ at the 1 per cent level) and *destructiveness* ($r_t = .50$ at the 5 per cent level) in boys, but not in girls, and at 3 to *poor enunciation* ($r_t = .77$) in girls; no significant relationship to any problems were found at year 5 with the sexes combined. With the sexes separated, the boys had no significant correlate with food finickiness and girls had two (the distributions preclude Pearsonian correlations), namely, *insufficient appetite* ($r_t = .57$) and *jealousy* ($r_t = .51$).

At age 12 very different associated patterns have developed in boys and girls with respect to finickiness, similar to that of *poor appetite.* The girls have only one significant correlation with finickiness and that an obvious and expected one, namely, *insufficient appetite* ($r = .38$). The boys, on the other hand, have seven statistically significant behavioral correlations, four at the 1 per cent level of confidence and three at the 5 per cent level, and two more that approach significance. These are: with *jealousy* ($r = .71$), with *lying* ($r = .60$), with *irritability* ($r = .58$), with *poor appetite* ($r = .58$); with *overdependence* ($r = .51$, 5 per cent level), with *attention demanding* ($r = .47$), and with *temper tantrums* ($r = .45$); and approaching significance, with *mood swings* ($r = .36$) and *negativism* ($r = .35$). The boys at year 12 have the fourth highest proportion of significant correlations with respect to girls on finickiness, exceeded only by *irritability, evasion* (lies), and *mood swings.* (We also saw in the previous section that girls had many correlates with *insufficient appetite* at age 5 and only two at age 12, whereas

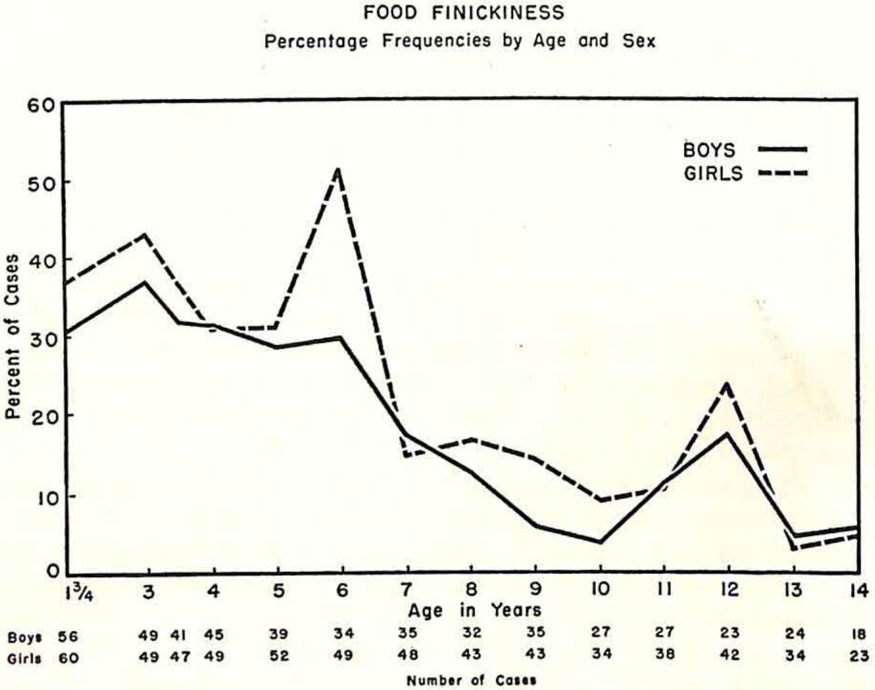


Fig. 31

boys had none at 5 and four substantial ones at age 12.) What is the meaning of this difference between boys and girls? Let us review a few facts and submit some hypotheses. The girls at 12 years average about one year before menarche; the boys nearly 3½ years before physiological maturity. Age 12 shows significant differences on four problems between boys and girls, the boys excelling in *overactivity* and *lies* (externalized behaviors), the girls in *disturbing dreams* and *physical timidity* (internalized patterns). Age 12 is the year that boys showed substantial drops in the frequency of *oversensitiveness* (59 per cent at age 11, 39 per cent at age 12), *physical timidity* (26 per cent to 4 per cent), and *specific fears* (52 per cent to 17 per cent). In short, age 12 for the boys seems to be a year of heroic efforts to give up unmasculine patterns and to establish masculine ones, to give up passive patterns and to establish aggressive independence-seeking ones. It is possible that the correlates for years 10 or 14 would have brought different correlates as age 5 did for *poor appetite*. Our hypothesis is that finicky eating (and to a lesser extent the attempt to show *poor appetite*) was a compromise pattern that accepted favors while permitting criticism of mother, the object of dependency-needs in one of her major functions (food giving). That food finickiness has its highest correlation in boys with *jealousy* and *attention demanding*, and with *overdependence* not far behind, indicates the dependency-needs aspect, whereas *lying* and *temper* correlates indicate the resistance to these dependency-needs aspects. Possibly, too, the mother, faced with these ambiguous demands and threatened with the loss of other functions, used food pampering as her major available tool. Perhaps the girls who didn't have the cultural need to shift patterns, who early had tried out fussy food habits, could use withdrawal and internalizing patterns more successfully, and perhaps food pampering of a girl was not so spontaneous a reaction in the mother as food pampering of a male.

In summary, girls are somewhat more finicky about their food than boys but only significantly so when they are in the first grade. The non-first boys are slightly more finicky than first-borns but only significantly so at one age (7 years). Finickiness about eating shows more consistent relationships through time than *poor appetite* and, like *poor appetite*, has its greatest variability for the 8- to 11-year period. In our intensive group, finicky eaters in the early years were recruited more frequently from parents with disharmonious relationships than from harmonious homes. An interesting discrepancy occurs between boys and girls, the girls having two significant behavioral correlates at year 5, the boys none; but at year 12, the girls have but one, whereas the boys have seven, which include *jealousy, attention demanding,* and *overdependence.* It appears to us that food finickiness is a pattern in boys associated with the dependence-independence struggle.

Sex Habits

Our data here are obviously very inadequate since mothers either knew little or volunteered little about three of these items, masturbation, exhibitionism, or unusual sex interest. We are not including figures on these three items but table 3 contains the obtained data.

EXCESSIVE MODESTY

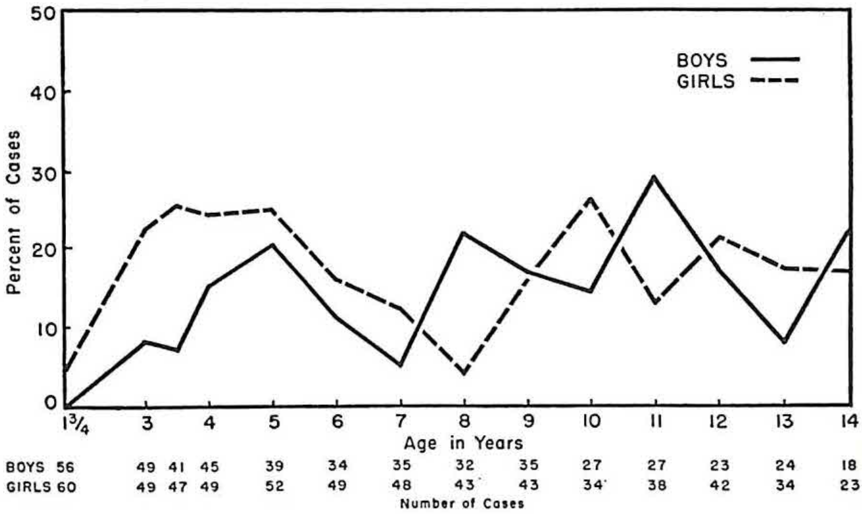
The data on excessive modesty were adequate to graph. The highest frequencies for excessive modesty among girls were at ages 3½ (26 per cent), 4 (24 per cent), and 5 (25 per cent) only, and again reached at age 10 (26 per cent). For the boys, four peaks occurred at ages 5 (20 per cent), 8 (22 per cent), 11 (30 per cent), and 14 (22 per cent). It is of interest that a significant difference (at the 5 per cent level) occurred at 3 years and 3½ years with more girls reported as excessively modest, and at 8 years with more boys reported as excessively modest. We have evidence from the intensive group that early modesty about the body was largely associated with elimination problems. It is probable that the latter concern is associated with late pubescent changes.

The average per cents were 12.0 for first-born boys and for non-first-borns, 15.6. No significant differences were found for girls between the first- and non-first-born, the average being 17.2 and 16.8.

Excessive modesty is in the lower third ($r = .18$) in persistency among the 5- to 14-year interage correlations. Using three-year intervals, the interage correlations range from –.01 from 5 to 8 years to .50 for ages 9 to 12, the only substantial correlation among all combinations of age intervals. The lowest interage correlations are between ages 5, 6, 7, and any other age level, indicating that this latency-period overmodesty, or lack of it, was not related to late pubescent modesty.

Excessive modesty showed no significant correlations at age 5 to any other problems where frequencies were high enough to compute correlations, nor to *health, intelligence,* or the rated *characteristics of the mother.*

At age 12, for boys, excessive modesty is associated at the 1 per cent level with *mood swings* ($r = .63$), *oversensitiveness* ($r = .59$), and *overdependence* ($r = .52$); and at the 5 per cent level with *excessive reserve* ($r = .45$), *negativism* ($r = .44$), and *irritability* ($r = .43$). With girls at 12, three significant correlations occur, as against the six for the boys, and all at the 5 per cent level, with *jealousy* ($r = .35$), *physical timidity* ($r = .32$), and *negativism* ($r = .30$). The correlations of the boys as to number and magnitude exceed those of the girls. Additionally, the boys' correlates involve tension, moodiness, and excessive reserve, and suggest that at 12 boys are under more stress with regard to body concern.



EXCESSIVE MODESTY

Percentage Frequencies by Age and Sex

Fig. 32

In summary, excessive modesty had a preschool peak for boys at age 5, for girls at 3½ to 5 (which from other data on our intensive group appears to be associated with *elimination problems* but is not shown in this group) and a pubescent peak at 10 in the girls, at 12 in the boys, probably associated with beginning biochemical changes and uneasiness growing out of the sizable variability in the beginnings of adolescent changes among both boys and girls.

IV. INDIVIDUAL PROBLEMS ASSOCIATED WITH MOTOR MANIFESTATIONS

TICS AND MANNERISMS

Tics and mannerisms showed frequencies too low to graph (see table 3). They reached their peak with the girls at 6 years (10 per cent), with the boys at 7 years (11 per cent). Three-quarters of each group had no record of this behavior at any age.

The non-first-born girls had the lowest score. No significant differences occurred between first- and non-first-born boys with respect to tics and mannerisms, the frequencies for each being low. For girls, too, the frequencies were low and at only one age level (6 years) was a significant difference discovered, and this was contributed by only four first-born girls.

NAILBITING

Nailbiting shows definite age trends with early low frequencies which work up to a preadolescent high, as other studies have reported. Boys show at 5 years, 8 per cent; 7 years, 23 per cent; 11 years, 30 per cent; 13 to 14 years, 33 per cent. Girls, though showing consistently more nailbiting than boys until year 14, similarly showed increasing frequency: at 5 years, 17 per cent; at 7, 27 per cent; at 9, 35 per cent; and at 11, 40 per cent.

In seven out of eleven age levels the non-first-born boys showed, to nonsignificant degrees, more nailbiting (the average of the per cents was 15.5 for first-born boys, 18.1 for non-first-born). The first-born girls led in eleven out of twelve age levels to nonsignificant degrees (the average per cents, 29.6 first-born, and 16.2 non-first). First-born girls did the most nailbiting, and they reached their peak frequency in this pattern two years earlier than any other group. However, the non-first-born girls at 11 years had only two problems with higher scores, namely, *disturbing dreams* and *excessive reserve*. Nailbiting varied in its time span as well as its beginning age. The time span was from one age level only to ten age levels and, no doubt, some are still doing it. Of the five girls in the entire group who were biting their nails at only one age level during the data collection period, one was 9 years old, one 10, two were 11, and one was 12 years old.

The top boy, 79 per cent, was an only child with fourteen reports. This boy was not loaded with other problems but both parents were nailbiters and it seemed more or less a family pastime.

The top girl, 80 per cent, was also an only child and had ten reports. She had older than average parents and was quite sheltered throughout the first 14 years. She did not openly rebel but was frequently unhappy about the situation.

No significant relationships to other problems were found before age 5 when it correlated (at the 5 per cent level) with *mood swings* ($r = .23$) with the sexes combined, and for girls with *irritability* ($r = .32$, 5 per cent level), and *overdependence* ($r = .28$). No correlates were obtained for boys at an adequate level of significance. At 12 years, the boys and girls had opposing patterns, the *nonjealous* ($r = .36$) and *nonoversensitive* ($r = .34$) girls showing nailbiting, whereas the *jealous* ($r = .36$) and *oversensitive* ($r = .34$) boys showed it, the correlations being identical but reversed as to sign. The only significant (5 per cent level) correlation obtained with ratings of mothers was with *poor use of language*.

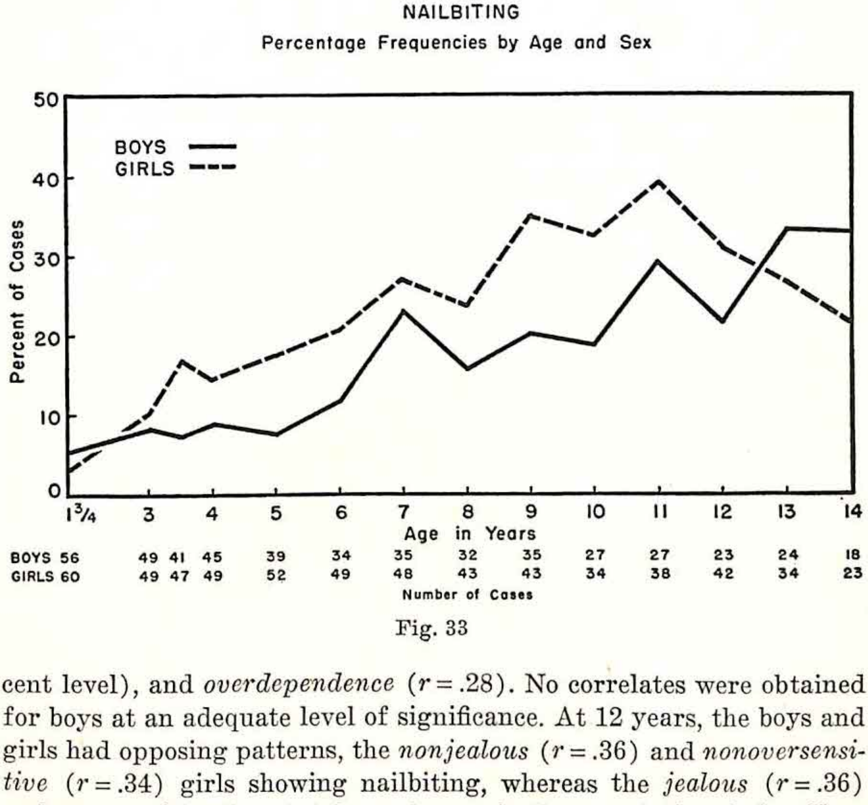


Fig. 33

In summary, the frequency of nailbiting rises in both boys and girls to reach its peak at late pubescence, both first-born groups reaching their top frequencies before the second-born of each sex did. We have no explanation for the difference in sign in the correlations at age 12 for boys and girls on *jealousy* and *oversensitiveness*.

THUMBSUCKING

Thumbsucking decreases in frequency with age, the reverse of *nailbiting*. At 21 months, one-fifth of the boys and one-third of the girls were sucking their thumbs. The girls remained in the lead and at ages 4 and 5, significantly so (at the 5 per cent level).

The *nailbiting* of boys increased at 6 years. This increase includes four former thumbsuckers. Peaks for girls occur at 7, 9 and 11 years. The 7-year report includes six former thumbsuckers; the 9-year, six; and the 11-year, eight. A few children were able to indulge in both thumbsucking and nailbiting at the same time but usually they were not concurrent and the thumbsucking came first. There were thumbsuckers who never became nailbiters and there were nailbiters who, from 20 months on, at least, had not sucked their thumbs.

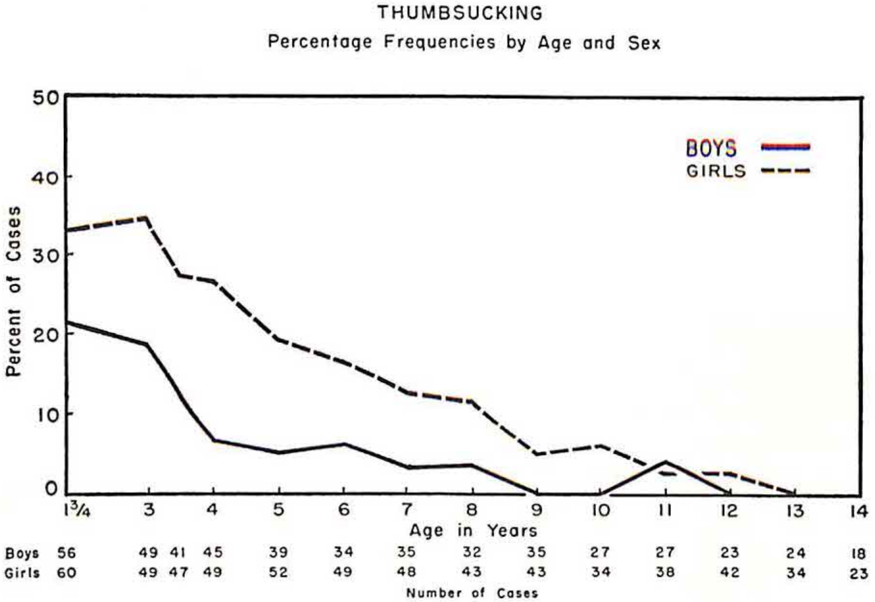


Fig. 34

The duration of thumbsucking varied from a single age level to as many as seven for one boy and nine for two girls. Usually it was present at 21 months if it was going to appear later. As the boys and girls started working on the elimination of this habit, it became intermittent and frequently one or more of the following problems appeared: *dis-*

turbing dreams, restless sleep, masturbation, or *tics.* Or, they might move directly into *nailbiting.* Occasionally the habit was dropped with no apparent aftermath.

The frequencies were low for the boys with inconsistent and not significant differences between the firsts and non-firsts. The frequencies were higher and the habit lasted longer for non-first-born girls who excelled at every age level where thumbsucking occurred, but to a non-significant degree. It is interesting to note in contrast that it was the first-born girls who did more *nailbiting.* The average per cent of thumbsucking for first-borns was 10.2 and for non-first-borns was 18.9. Among the girls, there were five non-firsts who carried thumbsucking beyond 6 years, whereas only one first-born did so. However, there were more first-borns among the female thumbsuckers who converted to *nailbiting.* The non-first-born girls did almost one-half of the thumbsucking done by all the boys and girls.

The top thumbsucking boy, 73 per cent, was a non-first-born with eleven reports. His other high scores were: *tempers,* 100 per cent; *overactivity,* 91 per cent; *jealousy,* 82 per cent. He had an older brother and sister.

The top girl, 77 per cent, with thirteen reports, had a sister 2 years older who also sucked her thumb. She had *disturbing dreams,* 62 per cent. At 7 years, she was still wearing a thumb guard at night.

Thumbsucking was persistent during the short age span it lasted. It was related to very few problems: in girls at 21 months with *enuresis* ($r_t = .45$), at age 5 with 5 per cent level correlations to *irritability* ($r_t = .23$) and *lack of reserve* ($r_t = .26$), and with no problem correlates at age 3. At age 5, it showed no significant behavioral correlates for girls but for the small number of boys it showed significant negative relationships to *timidity* ($r = -.44$) and to *reserve* ($r = -.30$). The frequency after age 5 was too low to permit correlations. It showed a low positive correlation to *coöperative mothers* and, in the intensive study, more recruits came from happy, permissive parents. It showed no significant relationships to *health, nutritional status,* or I.Q. (For what it may be worth, in an unpublished manuscript we report that girls who sucked their thumbs longest had significantly more oral references in their 18-year Rorschachs, whereas it was boys whose thumbsucking had stopped early that excelled in Rorschach oral references.)

In summary, thumbsucking declined rapidly with age, was more frequent in girls than in boys, and more frequent in non-first-born girls in contrast to *nailbiting* in which first-born girls excelled. It has very little relationship to other problems. It was unrelated to *nutrition, health, overdependence, somberness, overanxiety.* In our intensive group more thumbsuckers were recruited from relaxed happy homes.

OVERACTIVITY

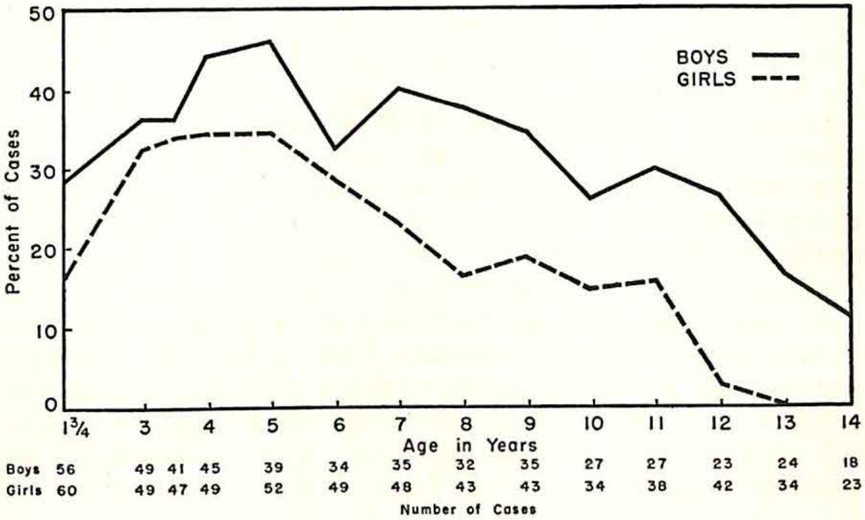
Overactivity was frequently difficult to divorce in its reporting from the mother's state of health, the home living space, and legitimate activities provided for the child. After age 6, there was a downward trend for both boys and girls, save for a minor increase in girls at ages 9 and 11, and for boys at 7 (40 per cent) and 11 (30 per cent). According to the mothers, the peak of overactivity came during the preschool years (when the children were with them more) for the boys at ages 4 (44 per cent) and 5 (46 per cent), and for the girls at 4 and 5 years (35 per cent). At 21 months, 29 per cent of the boys were called overactive by their mothers; 17 per cent of the girls were so classified. The boys continued to excel in this behavior throughout the age span studied, their average per cent being 31.9 as compared to 19.6 for the girls. There was a significant sex difference (at the 5 per cent level) at 8 years when the boys stood at 38 per cent and the girls fell to 16 per cent. At 13 years, the girls' curve dropped to zero. At 14 years, the boys' stood at 11 per cent.

In nine of the twelve age levels, and at all age levels from 5 on, non-first-born boys excelled first-borns in overactivity, but at only one age level (age 11) were these differences significant. The non-first boys' average per cent for all age levels was 37.3 as against 27.8 for first-born boys. But it was the first-born girl who led in overactivity, at ages 5 and 6 significantly so. The average per cent of the first-borns was 23.8 as opposed to 15.9 for the non-first-borns.

Among the consistently overactive boys was one who was the most persistent in his thumbsucking, another who had been an early thumbsucker, another who was enuretic. The persistently overactive boys were for the most part non-first-born. On the whole, their school achievement records were poor and some, although bright, had to have special coaching.

The most persistently overactive girls included one enuretic; one tomboy who tried to keep up with her three brothers was an early thumbsucker who turned to nailbiting at 6 years and continued through 13 years; one mentally accelerated girl who sucked her thumb through the first 10 years, was a slow maturer physically, and at 8 years had a basal metabolic rate of plus 38.

The persistence is indicated through interage correlations from the codings of degree which begin at age 5. The r between 5 and 14 years is –.13. For three-year periods, the highest correlation is between 7 and 10 years (.55) and the lowest, .14, between 9 and 12 years. For a five-year period, the highest correlation is between 5 and 10 years and steadily declines with age to .18 at 9 by 14 years. Although there were some persistently overactive children, most children did not persist in overactivity for the long age period.



OVERACTIVITY
Percentage Frequencies by Age and Sex

Fig. 35

Overactivity shows at 21 months only one significant behavioral correlate, a 5 per cent level of confidence correlation for boys with *negativisim* ($r_t = .55$) ; at 3 years, only one significant correlation and that, for girls, a negative one (at the 1 per cent level), namely, with *fears* ($r_t = -.65$). At 5 in boys, one 5 per cent level correlation occurred between *overactivity* and *destructiveness* ($r = .38$) and one with girls, namely, *mood swings* ($r = .28$). It looks at this age as if boys were acting out their frustrations and girls were beginning to internalize them. By 12 the occurrence of overactivity was too low to permit correlations. It should be pointed out that probably much of the overactivity listed at the early years was now subsumed under physiological reactivity listed as *irritability*. This we will see in a later section had many correlates (in fact, the highest number) for boys at age 12 but few for the girls.

In summary, overactivity recedes with age. Boys exceed girls in this behavior. Non-first-born boys and first-born girls show more. It is not a highly persistent pattern over long age spans although it had fairly good predictive capacity between 7 and 10 years. In boys overactivity is associated with *destructiveness* and *negativeness* in the preschool years and with *moodiness* in girls.

SPEECH PROBLEMS

Speech problems in the early years were largely a matter of retardation and poor enunciation, and in the later years more a matter of stammering. The frequencies were never high after the 21-month period when 30 per cent of the boys and 17 per cent of the girls had this problem. The slight fluctuations in the curves were produced by the varying numbers reporting at the different age levels as well as by the lapsing and recurrence of the problem. There was no consistent age change nor a significant difference between the sexes at any time.

The speech problems were concentrated in the first-born girls and non-first-born boys. The non-first-born boys led at all ages but one, but only at age 10 were the differences significant (25 per cent to 0 per cent). The average per cents were 4.1 for the first-born boys and 19.6 for the non-firsts. Again it was the first-born girl in contrast to the non-first boy who led (11.6 to 4.9) but no age differences are significant.

One girl who was not talking at 21 months and was retarded in speech at 3½ years, was referred to the speech clinic at 7 years. She was a thumbsucker from 3 months to 5 years, a nailbiter from 4 through 8 years. Another girl had defective hearing which affected her speech. Some children had enlarged adenoid tissue which blurred speech. One boy who was enuretic stuttered.

The behaviors correlated with speech problems at 21 months were *excessive dependence* ($r_t = .66$) in boys (at the 1 per cent level) and *restlessness in sleep* ($r_t = .47$), *soiling* ($r_t = .47$), *destructiveness* ($r_t = .67$), *negativism* ($r_t = .51$), and *tempers* ($r_t = .53$) at the 5 per cent level, a combination which suggests immaturity which is further supported by a significant correlation between *speech* and low I.Q. ($r_{bis} = .50$). At 3 years, girls showed a correlation (at the 1 per cent level) between speech problems and *food finickiness* ($r_t = .77$).

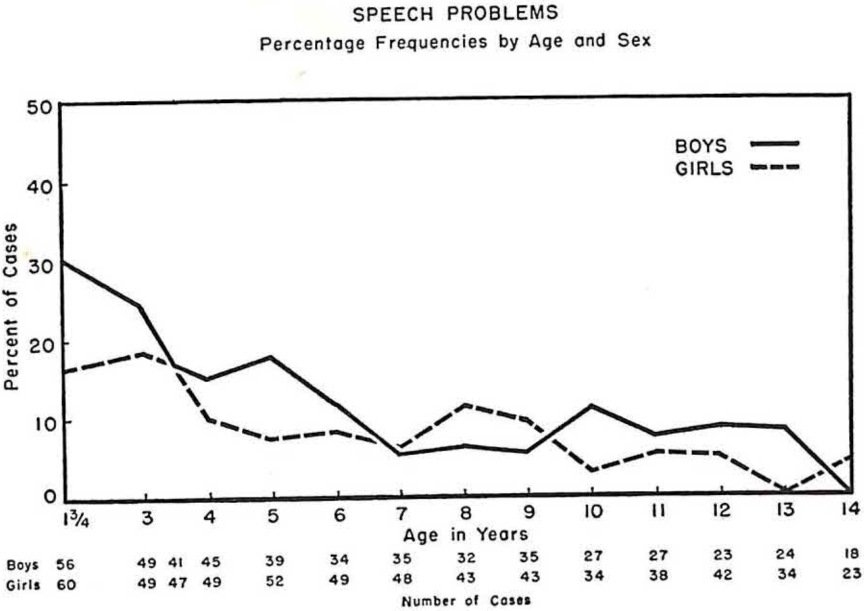


Fig. 36

In summary, the boys show slightly higher nonsignificant superiority in speech problems to the girls, non-first-born boys exceeding first-born boys and first-born girls slightly, but not significantly, exceeding non-first girls. The correlations with intelligence and immature habits suggest that these speech defects are associated with a slow maturity rate.

V. INDIVIDUAL PROBLEMS ASSOCIATED WITH SOCIAL STANDARDS

LYING

THERE ARE NO consistent age trends, as the frequencies of lying go up and then decline earlier in both respects for the girls than for the boys. The girls show their peaks of evasive behavior at ages 4 (49 per cent), 5 (42 per cent) and 6 (49 per cent) and then show a significant drop to 12 per cent at age 7. Whether this means that they are telling more subtle and less detectable lies or have found more effective patterns of problem solving is not clear. They show a very slight rise again at 8 years (19 per cent) due to two fresh recruits, "only" girls who were trying to circumvent excessively sheltering parents. A sharp decline followed this. The girls begin this pattern earlier and drop it earlier than the boys, according to mothers' reports.

The boys have their peaks of lying at years 5 (49 per cent) and 6 (53 per cent), the highest level, two years later than the first top peak for the girls, and after a drop, rise to a second peak at 8 years (41 per cent), picking up five new recruits slow to capitalize on the temporary benefits of evasion. Then they taper off in frequency. A statistically significant sex difference occurs at 8 years, but since what the mothers report as lies are detected lies, we are not certain whether the boys told more or only more obvious ones.

The non-first-born boys led in eight out of twelve age levels to non-significant degrees. The average per cent for the first-borns was 21.5 and for the non-first-borns, 26.3 per cent.

For the girls, the averages are similar, being 18.7 (first-born) and 17.1 (non-first). At age 9, the first-borns led significantly (32 per cent to 6 per cent).

For none of the children of the study was this a detectably persistent pattern. Correlates were not obtainable with other problems before age 5. The one amusing correlation was between lying and I.Q. ($r_{\text{bis}} = .58$) at age 3 in girls. This fits in with the fact that girls were more mature and began using this problem-solving technique earlier than boys, or it may mean merely that both a high I.Q. and lying required superior verbalization.

At age 5 the distributions were such that only tetrachorics could be computed. Only two significant correlations emerged and those were, for girls, with *somberness* ($r_t = .56$, 5 per cent level) and *attention demanding* ($r_t = .53$). The boys had none.

At age 12, boys had nine behavior correlates with lying. At the 1 per cent level, these were *irritability* ($r=.67$), *jealousy* ($r=.63$), *food finickiness* ($r=.60$), *overdependence* ($r=.56$), *negativism* ($r=.55$), and *attention demanding* ($r=.53$); at the 5 per cent level *oversensitiveness* ($r=.52$), *mood swings* ($r=.50$), and *insufficient appetite* ($r=.49$). *Excessive modesty* ($r=.40$) was just below an adequate significance level.

LYING
Percentage Frequencies by Age and Sex

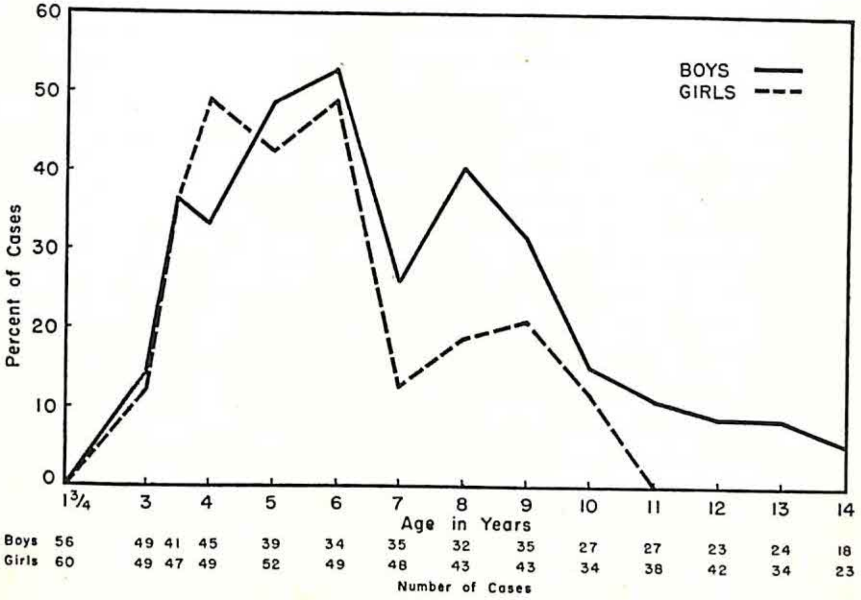


Fig. 37

In contrast, girls had no reported lying and hence zero correlates. As in the discussion under *food finickiness*, lying, like *food finickiness*, appears related in boys to hostile dependence and physiological irritability, both as a protective device and as an expression of retaliation against those on whom boys still need to depend while they are straining for independence and autonomy.

In summary, there were no consistent age trends for reported lying. Only at age 8 was there a significant age difference, boys exceeded girls although girls had started earlier. Persistency was low. The most striking finding was the difference in correlates to other problems at age

12 when girls had none and boys had nine, the third highest number of correlates for any problem. It appears to us to be a coping device associated with *irritability* and *hostility* and connected with their efforts to break the bonds of *excessive dependence*. Lying might reasonably be regarded in boys at this age as symptomatic of the struggle for independence.

The frequency figures for *truancy* and *stealing* are too small to graph but the data are listed for these two problems in table 3.

TRUANCY FROM HOME

Truancy from home made its first appearance at 3 years for both sexes, and it was gone by 7 years. It was no longer regarded as truancy by mothers when the children were old enough, in the mothers' eyes, to protect themselves and to enjoy more freedom. In no case was the child gone overnight. They were adventurers seeking companionship, excitement, or exploration, rather than attempting to run away from home. The boys were a bit more venturesome than the girls but their high at 5 years was only 10 per cent.

STEALING

The taking of property other than one's own had its peak at 3 years for both sexes. To call this stealing seemed erroneous since the concept of property rights is only beginning to be grasped at that age. At 5 years, 10 per cent of the boys and 4 per cent of the girls were checked on this item; at 7 years, 9 per cent of the boys and no girls; at 8 years, 9 per cent of the boys and 5 per cent of the girls; 9 years, boys, 6 per cent, and girls, zero. Only two boys were checked over a three-year period but there was, no doubt, more of this going on than the mothers knew about and/or chose to report. The school reports on a boy and a girl show they were having difficulties in this area at 14 years, but since the figures here are based solely on mothers' reports, this information does not appear on the chart. It would be erroneous to conclude, however, that all pilfering had been abandoned by the group. There are later court records to the contrary.

The reported frequencies are low for reporting stealing. Correlates with other behaviors were computed, therefore, at age 5 only. Here the only significant correlations were, for girls, with *destructiveness* ($r = .37$, 1 per cent level) and *overdependence* ($r = .28$, 5 per cent level). No significant relationships were obtained between reported stealing and I.Q., *health*, or *mother's characteristics*.

DESTRUCTIVENESS

Destructiveness shows a decline in frequency with age for the girls from 3 on, and after 5, an uneven decline for boys although the frequencies are too low for much confidence. The boys showed their highest frequencies at years 3 (20 per cent), 4 (20 per cent), 5 (28 per cent), 6 (24 per cent), and 8 (22 per cent), and then declined. At 21 months, there was only one candidate among the girls to eight, or 14 per cent, of the boys. By 3 years, both groups reached 20 per cent and that was the peak for the girls. From 7 years on it occurred only among the girls who were first-borns, but the percentages were too low to attach significance to this fact.

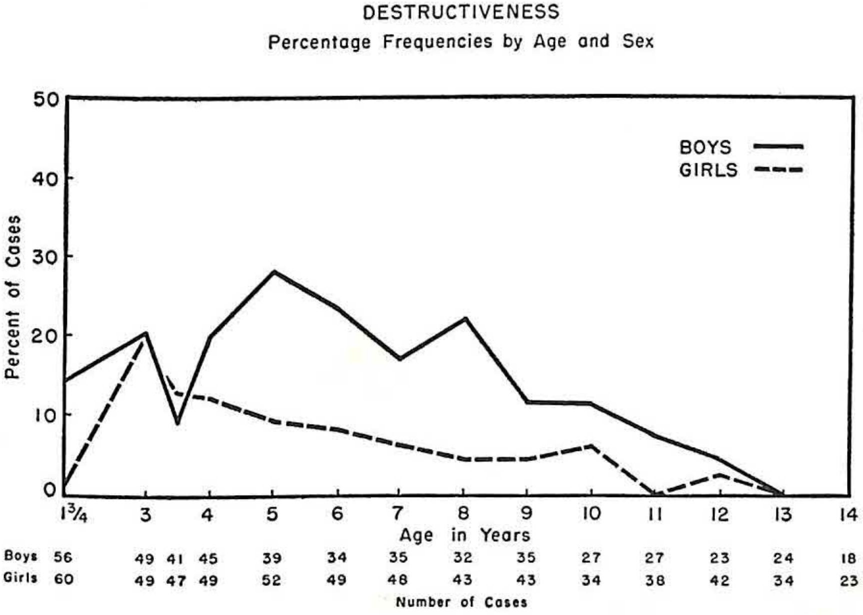


Fig. 38

As might be expected, this behavior and *overactivity* frequently teamed together, if not at the same time, then at different age levels in the same individual. How much destructiveness is due to curiosity and high energy level, how much to frustration and resentment, is unclear save in individual cases.

The non-first-born boys led in eight out of twelve age periods (in all, through age 7), but only at age 4 was there a significant difference.

The average per cent for the twelve age periods was 11.9 for the first-born and 16.9 for the non-first-born.

The first-born girls led to a nonsignificant degree in nine of the ten age levels where any girls showed destructiveness. The average per cents were 8.9 (first-born) and 3.4 (non-first-born).

With respect to persistence as measured by interage correlations, the longest time span available, 5 to 14 years, shows an r of .12 in the lower third of all problems and highly nonpredictive. For five-year intervals, the highest correlation of .45 obtains between ages 7 and 12; none exists between 5 and 10, or 6 and 11. For three-year spreads, the highest is for 9 to 12 (.42) and the lowest between years 11 and 14 (.27).

With respect to correlates of other problems at 21 months, boys show a significant correlation (at the 1 per cent level) with *poor enunciation* ($r_t = .67$) and *food finickiness* ($r_t = .50$), a correlation with *illness* ($r_{bis} = .50$, 5 per cent level), and a negative correlation with *intelligence* ($r_{bis} = .44$, 5 per cent level). At 5 years (both sexes together) destructiveness showed a 1 per cent level of confidence correlation with *negativism* ($r = .35$), *stealing* ($r = .33$), and *overdependence* ($r = .30$); and at the 5 per cent level, with *irritability* ($r = .26$), *tempers* ($r = .26$), and *overactivity* ($r = .24$), and a negative correlation with *oversensitiveness* ($r = -.21$). It is interesting to note that when correlations are broken down by sex at age 5, the boys show three, namely, with *negativism* ($r = .43$, 1 per cent level), with *irritability* ($r = .39$, 5 per cent level), and *hyperactivity* ($r = .38$, 5 per cent level); and the girls show three, namely, *tempers* ($r = .41$, 1 per cent level), *stealing* ($r = .37$, 1 per cent level), and *overdependence* ($r = .35$, 1 per cent level). Destructiveness was too low in frequency for correlations to be computed at age 12.

The correlations at 5 years with rated characteristics of the mothers are negative and significant at the 1 per cent level with *intelligence* and *poise* (confidence), and negative at the 5 per cent level with *personal appearance* and *coöperativeness in the study*.

In summary, frequency of destructiveness declines with age, boys exceeding girls but not significantly. Non-first-born boys exceeded first-borns slightly, and first-born girls exceeded non-first-borns. It was a problem of little or no predictive significance. There was evidence that slow mental growth and illness in the child, plus insecure and not-too-bright mothers were factors in the matrix of destructive behavior at age 5. The boys' correlates of destructiveness were *negativism, irritability*, and *overactivity;* and in the girls, *tempers, stealing*, and *overdependence* at age 5. Later behavioral correlates could not be obtained because of the low frequency of destructiveness.

VI. INDIVIDUAL PROBLEMS ASSOCIATED WITH PERSONALITY CHARACTERISTICS

UNDER THIS large grouping of personality characteristics, the largest frequencies occurred and persisted over the longest time span. This is because many of the items subsumed dealt with internalized and more durable characteristics. The problems associated with the controls of biological functions such as eating, sleeping, and elimination were symptoms of the socialization processes of the early physically immature years, and such problems, as for example, temper explosions and destructiveness, were early behaviors which were superseded by less overt and more internalized patterns which showed up in so-called personality characterizations.

In summarizing behavior over time, it is clear that the normal problem-solving reactions in the early years were largely immediate and overt. And when these overt patterns of direct action were disapproved or punished, the child then used verbalization to express anger or strain, then withdrew or used devices of evasion, and still later was forced into the more internalized controls through thinking, phantasy, dreams, or, if his life problems were unsolvable, by repression. The directions of his personality patterns were determined by his constitution, temperament, ability, what he had to adjust to, and what was permitted overt expression and what had to be internalized.

SELFISHNESS IN SHARING

Nonsharing or selfishness in sharing was added to the behavior inventory when the children were 7 years old. The girls had their maximum frequency score of 12 per cent at 7 and 8 years, the boys their maximum of 22 per cent at 8. There were twice as many boys as there were girls who were considered by their mothers as selfish about sharing. Among the girls, the nonsharing was more pronounced among the first-born (10.4 per cent to 3.6 per cent); among the boys, it was the non-first-born (18.3 per cent to 11.9 per cent).

It falls in the lower fourth of persistency measures from 7 to 14 years ($r = .06$). For three-year periods, the ages 10 by 13 showed the highest predictive figures ($r = .52$) and for that period of late pubescence, it is in the higher sixth for predictiveness. Its highest five-year period is from 8 to 13 years ($r = .44$).

The frequency figures were so low at age 12 and the distributions of codings were such as to preclude computing behavioral correlates.

The problem was added so late to the inventory that no data were available for the early periods when the children were probably in the throes of learning to inhibit taking things for themselves and learning to share. When longitudinal correlations are available we may be able to test the relationship between early variables such as toilet training and kinds of discipline as they relate to later compulsive selfishness and/or compulsive generosity.

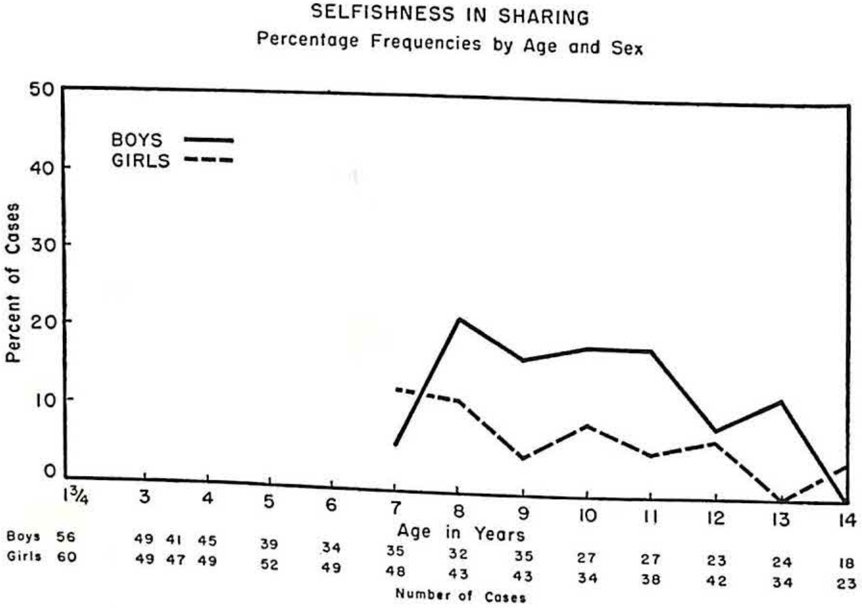

SELFISHNESS IN SHARING
Percentage Frequencies by Age and Sex

Fig. 39

QUARRELSOMENESS

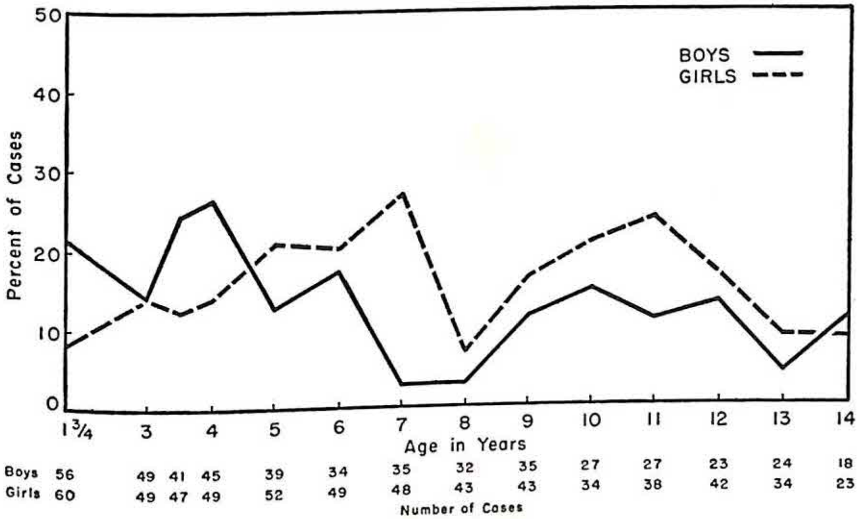
Quarrelsomeness was another item added at the 7-year level which yielded little information. The frequency figures are too small to graph but the data are listed in table 3, page 66. Either mothers had become accustomed to it and no longer considered it a problem or the great majority of the children had given it up as an ineffective tool. Non-first-born boys (8.7 per cent to 3.9 per cent) did the most of it and non-first-born girls the least (1.7 per cent to 8.2 per cent).

Quarrelsomeness was unpredictable from 7 to 14 years ($r = .05$) and in the lowest sixth of the problems. Interage correlations for three-year periods varied only ten points, .27 (7 by 10 years) to .37 (8 by

11 years), and for the five-year span was .37 (8 by 13). Quarrelsomeness, in short, showed little predictive significance although adjacent age levels showed increased correlations with age, on the *quarrelsome-non-quarrelsome* continuum.

EXCESSIVE EMOTIONAL DEPENDENCE

This behavior was, of course, symptomatic of many things, domination or rejection by a parent, insecurity in a child or an effective coercive technique or coping device by the child to manage his insecurity and his parents.



EXCESSIVE EMOTIONAL DEPENDENCE
Percentage Frequencies by Age and Sex

Fig. 40

It never included more than one-fourth of the group and showed no consistent age trends. It was higher in the boys in the preschool years (27 per cent at 4 years), dropped at 6 and 7 years and reoccurred for 15 per cent or fewer boys from 9 to 14 years. For the girls, the highest peak (27 per cent) was at 7 years, with a secondary peak at ages 10 (21 per cent) and 11 (24 per cent). The sex difference at 7 years is statistically significant at the 1 per cent level.

For eight out of twelve age periods, more non-first-born boys were reported as overdependent, although the difference between first- and non-first-born was never statistically significant at any age period. The average per cent was 9.5 for first-borns and 15.1 for non-first-borns.

The first-born girl had a higher frequency of excessive emotional dependence at ten out of twelve age levels, although not significantly so for any age level. For the total period, the first-born girls had an average per cent of 21.4 as against 11.4 for the non-firsts.

Among the persistently overdependent boys at the early ages were two asthmatics, one of whom did not enter school until he was 8½ years of age, and then only after extensive medication and operations for strabismus. He had only one check for overdependence after the 6-year level. When medical attention relieved the asthma and reduced parental concern, the overdependence disappeared. The second asthmatic boy had a mother too preoccupied with her own real and imaginary ailments and a father too annoyed by his complaining wife to give understanding support. This boy was hit by a car when he was 4½ years of age, injuring one lung and breaking several bones, and it was after this accident that the asthma appeared. The boy muddled through school with frequent absences. He had the highest number of overdependence checks. He was enuretic through 14 years, was one of those who both sucked his thumb and bit his nails. He had one of the highest records for *lying* and a substantial one for *stealing*. When he was 23, he was drafted into the army but was discharged after one hundred days because of his asthma.

The third boy high in overdependence was slightly undersized. His father, considerably older than his mother, was a craftsman in a nearby city, spending long hours away from home. This boy was full of fears and tension. At 7 years, he was not yet tying his shoe laces; he was sleeping with his 4-year-old sister; he was having her go to the basement with him because he was afraid of the dark. This fear of the dark lasted through 14 years.

For the girls, overdependence seemed more closely associated with problems growing out of sib order. At their 7-year peak, there were twice as many first-borns with this problem as non-first-borns, and at age 11, three times as many.

For the age levels from 5 through 14 years for which we have codings of degree, the interage correlation, .35, for this problem, is the highest for any problem. The three-year span showing the highest correlation is between 11 and 14 years ($r = .66$); the highest for a five-year span is 9 to 14 years (.51). Overdependence has the highest 1-year correlations,

.73, for 12 to 13 years, and .86 for 13 to 14 years. In short, although frequency figures are made up of different children at the successive ages, there is more persistence and predictive significance for this characteristic than for any on our list. The children become relatively stabilized on a continuum of dependence-independence and more so at the later years save for changing behavior around late pubescence. When we look at persistency for each sex separately, we find that correlations are higher for the longer age period, 7 to 14 (boys, $r = .25$; girls, $r = .45$) than for the shorter age period of 7 to 12 (boys, $r = .06$; girls, $r = .30$) which appears to indicate that at age 12, shifts were occurring in children; whereas by age 14 they had returned to their more characteristic patterns with respect to dependence-independence variables.

The only significant correlations of excessive dependence with other problems which appeared before 5 years were at 21 months and in boys. These were correlations with *poor enunciation* ($r_t = .66$), *negativism* ($r_t = .56$), and *temper tantrums* ($r_t = .47$). *Poor health* ($r_{bis} = .44$) was also a correlate at the 5 per cent level at age 21 months for the boys only. *Low intelligence* for the girls at age 3 was a significant correlate ($r_{bis} = .62$).

At 5 years in boys, significant correlations with excessive dependence had risen to five in number and, at the 1 per cent level, were *physical timidity* ($r = .54$) and *mood swings* ($r = .51$); at the 5 per cent level were *excessive demanding of attention* ($r = .38$), *irritability* ($r = .35$), and *negativism* ($r = .33$). At age 12, the boys showed seven significant correlations: at the 1 per cent level, *negativism* continuing ($r = .57$) and, coming into the picture, *lying* ($r = .56$), *excessive reserve* ($r = .54$), *excessive modesty* ($r = .52$); and at the 5 per cent level, *food finickiness* ($r = .51$), and *mood swings* ($r = .53$) continues as does *irritability* ($r = .47$).

At age 5, the correlates of dependency for girls are, at the 1 per cent level, *tempers* ($r = .42$), *irritability* ($r = .41$), *mood swings* ($r = .37$), *somberness* ($r = .35$), *specific fears* ($r = .35$), and *destructiveness* ($r = .35$); and at the 5 per cent level, *attention demanding* ($r = .32$), *negativism* ($r = .28$), *timidity* ($r = .28$), *nailbiting* ($r = .28$), *stealing* ($r = .28$), and *insufficient appetite* ($r = .27$).

By age 12 for the girls, the correlates of excessive dependence have dropped from twelve at age 5 to five at age 12, one of which is negative. These are, at the 1 per cent level, *somberness* ($r = .56$), *jealousy* ($r = .51$), *timidity* ($r = .45$), and at the 5 per cent level, *excessive reserve*

($r = .37$). The negative correlation is with *disturbing dreams* ($r = -.31$). The overdependent girls have changed from ages 5 to 12 appreciably in the behaviors associated with excessive dependence, becoming essentially nonaggressive—culturally the more acceptable behavior for a girl.

Characteristics of the mothers which correlate with the child's excessive dependence at 5 years are *lack of confidence and poise, unattractive personal appearance* at the 1 per cent level, and *mental dullness* and *lack of cheerfulness* at the 5 per cent level.

In summary, about 27 per cent of the boys showed excessive dependence at age 4. This incidence figure dropped at 6 and 7 years, only to have a secondary rise from 10 to 12. There was somewhat less of this problem in boys than in girls. The non-first-born boys and the first-born girls were the most likely to have the problem. Excessive dependence showed the highest persistence rate of any of the problems, and the second highest number of correlates with other problems. Its correlates in boys were with *ill health, poor enunciation* early, and with *negativism* through the entire age period; with *mood swings* and *irritability* at 5 and 12, and *excessive attention demanding,* and *physical timidity* at 5. The overdependence of boys seems to be associated with illness, immaturity, anger, resistance, and demands for attention, a combination subsumed under the label of hostile dependency. The excessive dependence of girls is not so consistent—it is associated with low I.Q. at age 3 but has no behavioral correlates then, and at age 5 with a large number of acting-out and hostile patterns; but by age 12 it is associated with nonaggressive patterns. The maternal contributions are *uncheerfulness, dullness,* and *insecurity.*

EXCESSIVE DEMANDING OF ATTENTION

The frequency of excessive attention demanding was never higher than one-fourth of the group. There was a consistent decrease for the girls (27 per cent at 21 months to 14 per cent or less from 8 years on) except for a slight and statistically nonsignificant rise at age 10. The boys showed a different pattern. They reached a peak of 27 per cent at age 4, and at 8, 9, and 10 showed percentages of 22, 23, and 26. There was a significant difference at the 1 per cent level between the sexes at 11 years when the boys stood at 18 per cent and the girls at zero. Forty per cent of the first-born boys were noisily demanding attention at 9 years.

More than two-thirds of the boys had at least one check in this behavior between 21 months and 14 years, but the five boys who initially were excessive attention demanders at 7 years or later and persisted in it are of special interest. These five included the three previously discussed as high in emotional dependence, who used attention demanding in the service of dependency, and two who were facile verbally and did Little Theater work in high school—still enjoying the limelight.

More than one-half of the girls had at least one check in this behavior, but those who were really persistent were all among the first-born. The most persistent attention demander was an only child who made a nuisance of herself in order to receive any attention. She was also the leader of the entire group in *food finickiness.*

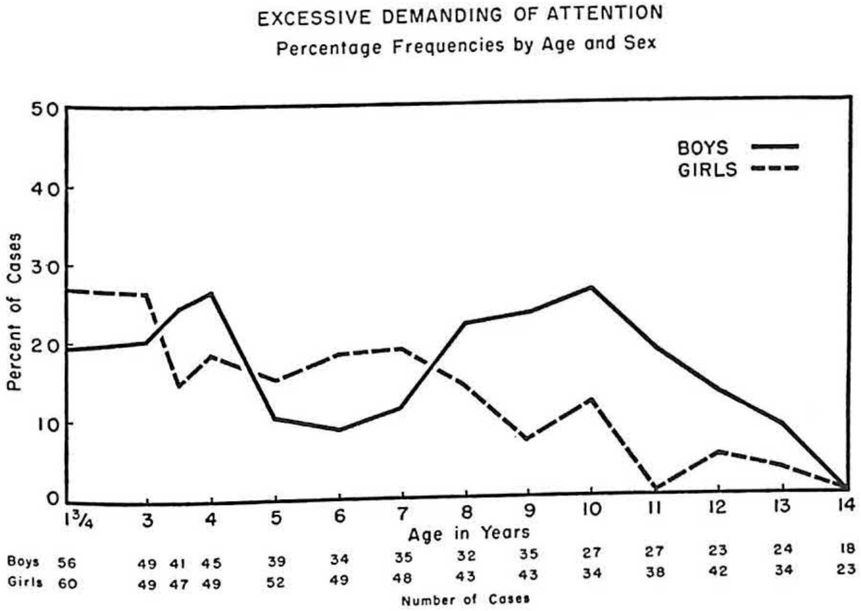

EXCESSIVE DEMANDING OF ATTENTION
Percentage Frequencies by Age and Sex

Fig. 41

For this problem it was the first-born of both sexes who were reported frequently. For the first-born boy, eight of twelve rating periods showed higher frequencies, although only at age 9 was the difference statistically significant (40 per cent to 10 per cent). The first-born boys' average per cent was 20.2 to 15.7 for the non-firsts.

The first-born girls had a higher frequency at ten of the twelve year levels, and at ages 3 and 8 significantly so. The average per cent was 19.8 for the first-borns, 7.2 for the non-first-borns.

Attention demanding was a pattern low in persistence over the age span ($r = .01$) from 5 to 14 years. The interage correlations by three-year spans tend to increase, which suggests that the children are becoming more stabilized in their patterns (5 years by 8 years = .26, 6 by 9 = .10, 7 by 10 = .21, 8 by 11 = .50, 9 by 12 = .51, 10 by 13 = .33, and 11 by 14 = .65). The correlations for five-year intervals steadily increase with age (5 years by 10 years = .08, 6 by 11 = .22, 7 by 12 = .28, 8 by 13 = .36, and 9 by 14 = .52).

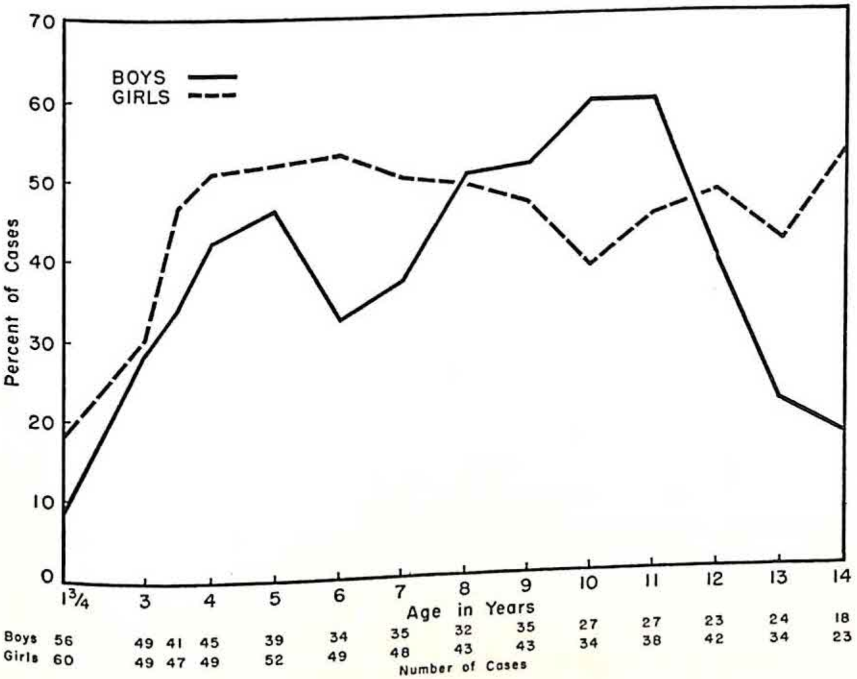
The problems associated with excessive attention demanding for boys were: at 21 months, *physical timidity* ($r_t = .60$, 5 per cent level); at 5 years, *mood swings* ($r = .51$, 1 per cent level), *overdependence* ($r = .38$, 5 per cent level), and *irritability* ($r = .31$, 5 per cent level). At 12 years, *excessive dependence* ($r = .37$) had fallen just below the significance level, perhaps a result of the small number of cases, but *irritability* ($r = .44$) continued; *jealousy* ($r = .42$, 5 per cent level) had come into the picture, together with *insufficient appetite* ($r = .50$, 5 per cent level), *food finickiness* ($r = .47$, 5 per cent level), and *lying* ($r = .53$, 1 per cent level).

For girls, the problems associated with excessive attention demanding were, at the 1 per cent level, *negativism* ($r_t = .64$), and *tempers* ($r_t = .57$) at 21 months, and *restless sleep* ($r_t = .63$) at 3 years. By 5 years, the correlates of attention demanding were six in number and were at the 1 per cent level, *mood swings* ($r = .47$), *irritability* ($r = .40$), *physical timidity* ($r = .37$); and at the 5 per cent level, *lying* ($r_t = .53$), *overdependence* ($r = .32$), and *jealousy* ($r = .32$). By age 12, excessive attention demanding in girls was associated at the 1 per cent level with *restless sleep* ($r = .48$) and *irritability* ($r = .41$), and at the 5 per cent level with *tempers* ($r = .35$). It was found not to be associated with poor health, I.Q., or with rated characteristics in the mother.

In summary, excessive attention demanding declines with age, boys exceed girls, first-borns exceed non-first-borns. There is little persistency through the whole time span but, with increasing age, the children become more stabilized in the degree to which they use or fail to use this coping behavior to handle their insecurities. It appears as one of those compromise reactions of a timid, overdependent, moody, and jealous first-born who, in reactive fashion, seeks support by demanding attention.

OVERSENSITIVENESS

Oversensitiveness was like the common cold—almost everybody had it. It had the highest frequencies over the age span of any reported problem, averaging 37.5 per cent for boys and 44.4 per cent for girls. It therefore merits further discussion. Two major factors appear to be involved in these reported high frequencies. The interviewer got the impression that the mothers, in reporting oversensitiveness, were in effect saying, "I have a very precious, vulnerable child of whom I am an understanding and protective mother and while his oversensitiveness complicates living and is hard to deal with, it gives me considerable satisfaction to have produced and to be indispensable to such a special child." A second factor appeared to be that "hurt feelings" was one of the most effective coping devices the children evolved for a large number of problem-solving situations with their parents, and that whereas in many instances it involved some real tension, it was not equaled by any other pattern as a pattern of control and coercion. It was apparently more effective in serving the same ends than were overt aggression and evasion, which were more obvious to parents and, there-


OVERSENSITIVENESS

Percentage Frequencies by Age and Sex

Fig. 42

fore, could be dealt with directly and disapprovingly. This coping interpretation is supported by the fact that, in boys, when peer culture pressures become strong at the late pubescent ages, the oversensitiveness of boys abruptly dropped from 59 per cent at age 11 to 21 per cent and to 17 per cent at ages 13 and 14 respectively, many mothers then complaining that their sons had now "become insensitive." The stereotype of maleness was incompatible with oversensitiveness. Oversensitiveness was not in opposition to the feminine stereotype, and it continued to be maintained by close to 50 per cent of the girls through age 14 and probably will continue into adulthood if it still is effective.

First-born boys had the higher frequency of oversensitiveness at 8 out of 12 reports but only at age 7 was the difference significant (57 per cent to 24 per cent). The average per cent for all twelve ages showed the first-born to be 44.5 per cent and the second-born, 35.9 per cent.

The non-first-born girls had a higher incidence of this behavior, on the average 47.2 to 40.2 per cent. They were higher at six out of ten age periods, and at age 4, this difference was statistically significant.

Reported oversensitiveness had the second highest persistence score of all problems for the ages 5 to 14. It had the highest persistence score by a substantial margin of any of the eleven problems from 9 to 12 years, although at the earlier three-year period, 5 to 8, it was in the middle group, and from 11 to 14, it had dropped appreciably largely because of the boys' great drop in the use of this pattern.

Data on oversensitiveness were not obtained systematically before 5. At 5 years for boys there was only one significant correlation with oversensitiveness, and that a negative one, with *negativism* ($r = -.32$) which means that the nonsensitive boy is reported by his mother as stubborn or negativistic. By age 12, for boys, oversensitiveness is correlated at the 1 per cent level with *excessive modesty* ($r = .59$) and at the 5 per cent level with *lying* ($r = .52$), *mood swings,* ($r = .48$), *jealousy* ($r = .46$), and *irritability* ($r = .44$) and, unlike age 5, it now correlates positively, although not significantly, with *negativism* ($r = .37$).

In girls of age 5, oversentiveness has four significant behavioral correlates: at the 1 per cent level with *physical timidity* ($r = .47$), with *negativism* ($r = .37$), and with *somberness* ($r = .36$); and at the 5 per cent level with *excessive reserve* ($r = .28$). At age 12, girls present three positive correlations, oversensitiveness being related to *somberness* ($r = .52$, 1 per cent level), *timidity* ($r = .33$, 5 per cent level), and to *negativism* ($r = .31$, 5 per cent level). There is a negative correlation with *nailbiting* ($r = -.34$).

At face value, we would expect oversensitiveness, if really a true appraisal, to be related to many symptomatic expressions of an uneasy personality. Instead, it has many fewer correlates than other personality problems, in both boys and girls.

Oversensitiveness shows no significant correlation with health although for boys at 21 months it approaches significance ($r_{\text{bis}} = .40$) but by age 3, this had dropped to zero for the boys and is close to zero for the girls at both ages. It shows no significant relationship to mother's characteristics or to the child's I.Q.

In summary, oversensitiveness appears overreported by mothers, according both to clinical impression and to the relatively low number of correlates. It has a higher frequency for girls than for boys at all ages but 10 and 11. The girls maintain close to a 50 per cent level from age 4 on; the boys reach the 50 per cent level at age 8, and maintain or surpass it through age 11. It is then apparently dropped for more accepted and appropriate male patterns. The first-born boy and the non-first-born girl were more often reported as oversensitive. It appears to be one of the most effective coping devices to use on parents since it is less obvious and more baffling to them than other behavior techniques.

PHYSICAL TIMIDITY

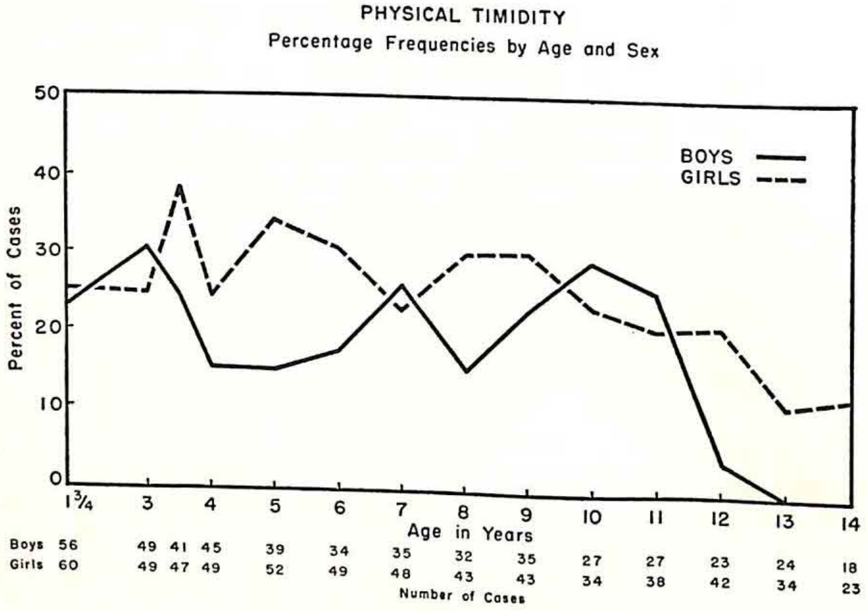
No clear age trends occur for the boys. Their average is 18 per cent for the whole age period (21 months through 14 years). Their peaks occurred at ages 3 (31 per cent) and 10 (30 per cent), and almost as high at 7 (26 per cent) and 11 (26 per cent). Like *oversensitiveness*, and perhaps for the same cultural reasons, physical timidity shows an abrupt drop at age 12, and at ages 13 and 14 no boy was so reported.

For the girls, there is an irregular decline with age though never below 10 per cent. Their average for the whole age period is 25 per cent. Their highest level was at 3½ years (38 per cent), 35 per cent at age 5, 30 per cent at 8 and 9, 21 per cent at 11 and 12. Of the four girls regarded by their mothers as timid at 13 and 14, two were so described for the first time and both of these were overweight and socially uneasy about it. Two girls who showed marked timidity at 3 and 4, later obtained the highest scores in *overactivity* as if the timid role was not paying off. At all events, aggressive overactivity superseded it.

For first-born boys and non-first, there is little difference in the number of age levels when one or the other showed physical timidity, but the average per cent for the first-born (22.6) is higher than that of the non-first (15.8), and the only statistically significant difference at any age level (year 9) shows the first-born leading.

For the girls, there is little difference between first- and non-first-born (their average per cents being 25.5 and 24.7) except at age 11 when the first-borns show a significantly greater frequency (35 per cent to 6 per cent).

Interage correlations show no predictive significance between ages 5 and 14 ($r = .06$). The correlation for three-year periods is high ($r = .50$) only for ages 11 to 14. There is no correlation between the three-year period 7 years and 10 ($r = -.01$), meaning that different children are presenting this pattern at these two ages. For five-year periods only one shows a substantial relationship, namely, at ages 6 to 11 ($r = .43$). It is of interest that for this longer period (6 to 11) there is predictive significance whereas for the shorter period within it (7 to 10) there is none (–.01).


PHYSICAL TIMIDITY

Percentage Frequencies by Age and Sex

Fig. 43

The problems with which physical timidity is related are as follows: at 21 months for boys, *excessive attention demanding* is the only significant correlation ($r_t = .60$) although *negativism* approaches it ($r_t = .49$). For girls at 21 months, *specific fears* ($r_t = .64$) and *restless sleep* ($r_t = .63$) are correlated with physical timidity.

At 5 years (with the sexes combined) there are six correlations at the 1 per cent level of confidence, namely, *mood swings* ($r = .39$), *overdependence* ($r = .37$), *oversensitiveness* ($r = .34$), *excessive attention demanding* ($r = .30$), *irritability* ($r = .29$), and *excessive reserve* ($r = .29$). At the 5 per cent level of confidence, correlates occur with *negativism* ($r = .26$) and *somberness* ($r = .26$).

At five years with separate computations for the sexes, physical timidity was associated in boys with two problems, namely, *overdependence* ($r = .54$, 1 per cent level) and *excessive reserve* ($r = .35$, 5 per cent level), and negatively with *thumbsucking* ($r = -.44$) ; that is, timid boys were not thumbsuckers. At age 12 no significant correlates were obtained because physical timidity had dropped out, or down, for boys.

With girls at 5 years, timidity was associated with eight problems in contrast to the boys' two. There were four at the 1 per cent level of confidence: *mood swings* ($r = .48$), *oversensitiveness* ($r = .47$), *irritability* ($r = .44$), and *excessive demanding of attention* ($r = .37$). There were also four at the 5 per cent level, namely, *somberness* ($r = .33$), *overdependence* ($r = .28$), *specific fears* ($r = .27$), and *negativism* ($r = .27$). At 12, although timidity was at a high level for girls, the significant correlates of physical timidity had been reduced to a total of five, namely, *somberness* ($r = .56$), *excessive reserve* ($r = .50$), and *overdependence* ($r = .45$) at the 1 per cent level; and *oversensitiveness* ($r = .33$) and *excessive modesty* ($r = .32$) at the 5 per cent level. It is interesting to observe that there is no relationship between physical timidity and such aggressive overt behavior as *overactivity* and *tempers*. It is essentially related to other withdrawal patterns. It has no significant correlates with the ratings of mothers' characteristics, physiologic status, illness rating, or I.Q. These nonsignificant correlations point in the direction of less intelligence and better physical status.

In summary, the girls show slightly more physical timidity than boys; the first-born boys show more than the non-firsts, and at one age level this is true of the first-born girls. The persistency measures showed little predictive capacity over the whole age span, none for ages 7 to 10 but considerable from 6 to 11 years. The other problem correlates were largely withdrawal patterns such as *mood swings, overdependence, oversensitiveness, negativism, excessive modesty, excessive reserve,* and *somberness*. It appears essentially a problem-solving device by avoidance or withdrawal.

SHYNESS

Shyness data were not secured systematically until age 7. From then on through year 14, the boys' highest peak was at age 12 (22 per cent), and fell to zero at age 14. The girls showed higher frequencies—statistically so at three of the age levels, years 7, 9, and 11 when their peak frequency was 37 per cent, and unlike the boys, from 18 per cent to 26 per cent of the girls were still reported as shy at ages 12, 13, and 14.

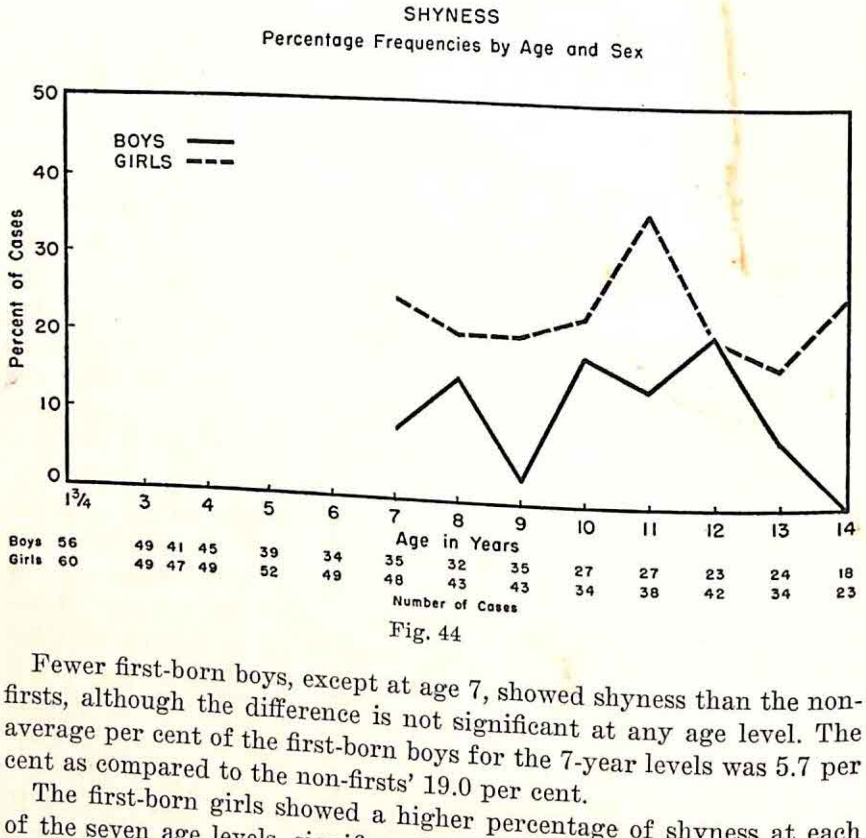

SHYNESS
Percentage Frequencies by Age and Sex

Fig. 44

Fewer first-born boys, except at age 7, showed shyness than the non-firsts, although the difference is not significant at any age level. The average per cent of the first-born boys for the 7-year levels was 5.7 per cent as compared to the non-firsts' 19.0 per cent.

The first-born girls showed a higher percentage of shyness at each of the seven age levels, significantly so at year 7 (42 per cent versus 8 per cent) and 11 (55 per cent versus 17 per cent). The first-borns' average per cent also was considerably higher (33.0 per cent versus 13.6 per cent). Shy or not, more than half of them were married by age 21.

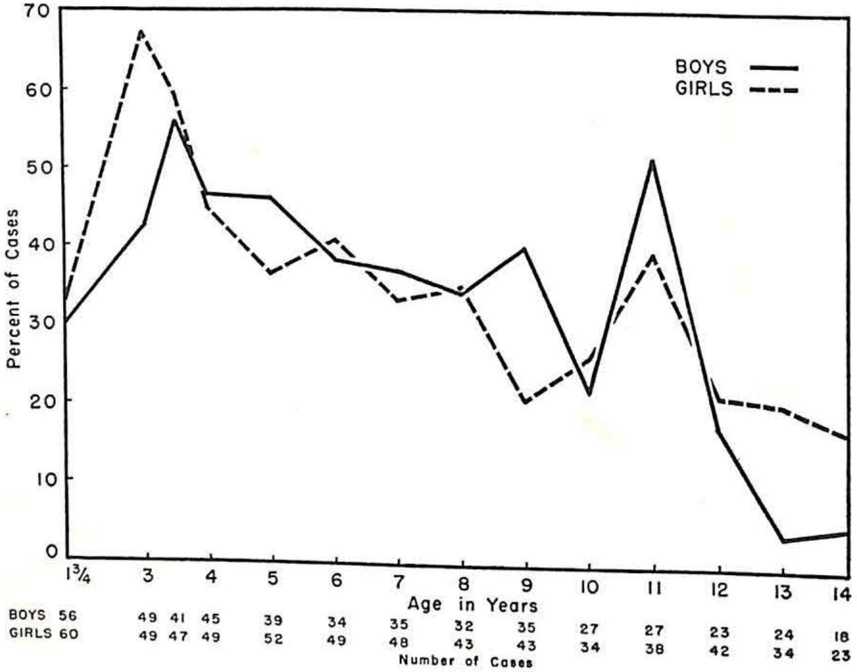
With respect to persistence, shyness had the highest interage correlation between ages 7 and 14 years ($r = .60$). The three-year interage correlations were higher between 7 and 10 years ($r = .52$) than between 8 and 11 ($r = .39$) or 9 and 12 ($r = .38$) years, but rose again at between 10 and 13 ($r = .50$) and between 11 and 14 ($r = .73$), the highest correlation for any problem for that age span. The highest correlation for five-year spans on the continuum of shy to non-shy was at the older age period between 9 and 14 ($r = .54$), rising from a correlation of .22 for the 7 to 12 period and .34 for the 8 to 13 period. The 9 by 14 correlation is higher than the shorter 9 by 12 period ($r = .38$). In short, the degree of shyness becomes increasingly predictive with age except for year 12. No behavioral correlations are available.

In summary, since there were no systematic data available before 7, the statements concern only the period from 7 to 14, when girls excelled boys in frequency with their peak at 11 years, whereas the boys' high peak was at 12 years and then only one out of eight was so reported. Non-first-born boys and first-born girls showed more shyness. Shyness was in the higher third of the problems with respect to predictive power especially in the later age levels except for year 12.

SPECIFIC FEARS

Specific fears were reported at least once for more than 90 per cent of the children. The frequencies showed definite down trends with age for both boys and girls except for an increase for both at age 11. For the boys, the highest peak was at age 3½ (56 per cent) and declined fairly steadily until age 9 when it rose to 40 per cent and age 11 to 52 per cent, and then dropped precipitously at ages 13 and 14 (just like *oversensitiveness* and *physical timidity*). The girls' high frequency peak was at age 3 (67 per cent) and declined steadily to 9 years (21 per cent). Another peak occurred, as it did for the boys at 11 years (40 per cent), after which it returned to around 20 per cent. The early preschool fears had appeared to us more situationally determined, that is specifically conditioned, the later ones more anxiety determined, but in the findings on interrelationships at age 5, it was clear that they were also anxiety determined. The girls showed significantly higher frequencies than the boys at ages 3 (67 per cent to 43 per cent) and 13 (21 per cent to 4 per cent), but the average per cents for the whole age span were for boys, 33.7, and for girls, 25.4.

Dogs were the predominant fear of both boys and girls at 3 years. The dark began to be mentioned at 3½ years and by 4 years, was outranking dogs among the boys. Only one boy was reported as fearing dogs after age 7. Only two girls hung on to their fear of dogs after age 8. For the boys, the dark was reported twice as often as dogs. For the girls, the dark and the dogs were equally feared. There were a few fears of fire engine sirens, earthquakes, kidnaping, fast driving, snakes, and high places.



SPECIFIC FEARS

Percentage Frequencies by Age and Sex

Fig. 45

The first-born boys show at eight of the twelve age levels more fears although at no age are the differences significant. Their average per cent is 36.7 as against 32.2 per cent for non-first. The first-born girls showed more fears at seven out of twelve age periods and an average per cent of 37.1 as compared to 32.5 per cent for the non-firsts. The peak of total girl frequency at age 11 was entirely contributed by first-born girls. However, at 21 months, the non-firsts showed significantly more. Whether this was situationally induced by the actions of jealous first-borns is not clear in this nonintensively studied group but was clear in our intensive group.

The top boy, 100 per cent, was a first-born with ten reportings. His fear of the dark persisted through 14 years. He was generally insecure and erratic in school and out. His mental test scores were consistently below the group average, his physique did not lend itself to athletics, and he shunned competition. He was tense, distractable, undependable, and dropped out of high school after the first year.

The top girl, 92 per cent, an only child, was also the top girl in *disturbing dreams*. Her fears were mostly of the dark. From 8 to 13 years, she was talking in her sleep. Her scholastic record was excellent and she had close friends, quite in contrast to the top boy. When the girl was 17, her mother stated: "There's no doubt about what's been the most disturbing thing in her life. And that's her parents and their relationship to each other. She's always been embarrassed and disturbed if anybody drank too much. Part of that was because they didn't behave too well, but a lot was due, I think, to the fact that emotions, no matter what kind, if they aren't covered up completely, scare and embarrass her."

Persistency figures on fears were not computed. Other problems with which fears show significant correlations follow: at the 1 per cent level, *physical timidity* ($r_t = .64$) for girls at 21 months, and for boys ($r_t = .63$) at 3 years; also at 21 months for girls *temper tantrums* ($r_t = .44$) and a negative correlation with *overactivity* ($r = -.65$) at the 1 per cent level. At age 3, there was a significant (5 per cent level) relationship between fears in boys and *freedom from illness* ($r = .42$).

By 5 years, the correlates of fears with the sexes combined are *irritability* ($r = .28$), *temper tantrums* ($r = .21$), and *negativism* ($r = .21$). When correlations were computed separately for boys and girls at age 5, even with the reduced number of cases, eight significant correlates occurred in place of three with the sexes combined. The sex differences by age 5 were of such magnitude that combining the sexes masked the true relationships. One of these eight significant correlates was obtained by the boys—namely, with *negativism* ($r = .32$, 5 per cent level). The girls' seven significant correlates were, at the 1 per cent level of confidence, *irritability* ($r = .43$), *somberness* ($r = .41$), and *overdependence* ($r = .35$); and at the 5 per cent level, *mood swings* ($r = .31$), *insufficient appetite* ($r = .31$), *tempers* ($r = .29$), and *timidity* ($r = .27$). This finding with respect to fears, both as to the number and the nature of the correlates, showed the girls to be more pervasively uneasy at 5 than were the boys. This is discussed elsewhere under *mood swings* and *irritability*. At age 12, distributions precluded the computing of correlations.

In summary, specific fears declined with age save for a one-year spurt at age 11 for both boys and girls. Age 11 was the premenarche year for many girls, but since it was not equally preadolescent for the two sexes, one thinks of situational factors as probably important. It was, for two-thirds of the group, their last year in elementary school, and it was the year that World War II began. Age 3 is highest for the girls and for the boys; age 3½ marks the early high, equaled again at age 11, followed by an abrupt drop to a new low. Girls show significantly more fears than boys only at ages 3 and 13. The peak at age 11 for girls was contributed entirely by first-born girls, suggesting, perhaps, that from their early anxieties surrounding the advent of younger sibs, they are more susceptible to fear and anxiety in the face of later changes and threats. The correlates at age 5 for the girls indicate that the base for their specific fears is a generalized anxiety seen in such other behaviors as irritability, mood swings, somberness, restless sleep, and so on.

MOOD SWINGS

Data on mood swings were not obtained for years 7, 8, and 9 because of one of those accidents that occasionally happen in a long longitudinal study, so it is not graphed (see table 2 for the data). The frequencies are higher during the period of 10 through 14 years for both boys and girls than during the period up to 6 years. Mood swings reached a peak for both sexes at age 11 when 41 per cent of the boys and 40 per cent of the girls were reported to be having mood swings, after which both dropped—the boys to 22 per cent and the girls to 30 per cent at age 14. In the first four age levels, the boys slightly, but not significantly, exceeded the girls. This was reversed at ages 5 and 6, the girls at 6 showing significantly more than the boys whose frequency figures had dropped whereas the girls continued at about the same level. The average per cents over the age span are the same for both, 22.2.

In six of the nine age levels, the first-born boys showed more mood swings although none of the differences is significant. The average per cent of the nine age periods for the first-born boys is 24.0 per cent as against 20.3 per cent for the non-firsts.

The differences are more marked for the girls, the first-borns exceeding the non-first at seven out of nine levels and significantly so at ages 11 and 12. The average per cent for first-born girls was 29.3 as compared to 12.8 per cent for non-firsts.

The top boy, 86 per cent, a first-born with ten reports, had a score of 90 per cent in *overactivity*, and his mother considered him "selfish."

His school reports were favorable. There he had friends and was a leader. His mood swings, beginning early, were home-grown and may have been used only there.

The top girl, 89 per cent, a first-born with twelve reports, was also the top girl in *nocturnal enuresis, overactivity, negativism,* and *irritability*. She was the only child in the study with five persistent problems. She was a mouth breather, had tonsils out before she was 3 years old, was underweight, had poor posture, and was completely undisciplined by her baffled parents. The early school reports were: tense, show-off, bossy, and not popular. She was a slow maturer, was tall and thin, an irritable organism with little insulation against her environment at which she struck back with great intensity and with a variety of patterns.

Because of the gaps in mood swing data, persistency correlations could not be computed. *Lack of poise* and *confidence* in the mother and *lower intellectual function* are associated at age 5 with mood swings, as is a *tendency to criticize the child.*

The number of significant relationships to other problems is second only to *irritability,* and involved 15 other problems. For boys, mood swings were correlated with *irritability* ($r = .55$ at age 5, .70 at age 12) and with *overdependence* ($r = .51$ at 5 years, .53 at 12 years), all four correlations being at the 1 per cent level of confidence. The following problems showed an increase in magnitude between 5 and 12 years: *somberness* ($r = .34$, 5 per cent level at 5 years, and $r = .49$ at the 5 per cent level at 12 years); and with *negativism* ($r = .32$, 5 per cent level at 5 years; $r = .65$, 1 per cent level at 12 years). Mood swings were correlated with *tempers* ($r = .49$, 5 per cent level at age 12 but not significant at age 5 [$r = .28$]); with *overmodesty* ($r = .63$, 1 per cent level) at 12 but not at 5 ($r = .01$); with *excessive reserve* at age 12 ($r = .62$) but not at 5 ($r = .14$); with *jealousy* at 12 years ($r = .47$, 5 per cent level) but not at 5 years ($r = .05$); with *oversensitiveness* ($r = .48$, 5 per cent level) at 12 but not at age 5 ($r = -.23$). A correlation with *attention demanding* ($r = .51$, 1 per cent level at age 5) was not significant at age 12 ($r = .08$).

For girls, only one problem was correlated at the 1 per cent level with mood swings at both ages 5 and 12, namely, *irritability* ($r = .63$ at 5, .50 at 12 years). Ten problems were correlated with mood swings at age 5 and only three at age 12. Mood swings for girls correlated with *overdependence* ($r = .37$ at age 5, 1 per cent level; .28 at age 12, nonsignificant); *insufficient appetite* ($r = .47$, 1 per cent level at age 5;

.01 at 12); *excessive demanding of attention* ($r = .47$, 1 per cent level at age 5; $r = .25$, nonsignificant at age 12); *physical timidity* ($r = .48$, 1 per cent level at age 5, $r = .20$, nonsignificant, at age 12); *somberness* ($r = .57$, 1 per cent level at age 5); *excessive reserve* ($r = .32$, 5 per cent level at age 5); *jealousy* ($r = .30$, 5 per cent level at age 5, .28, below an adequate significance level, at 12); *overactivity* ($r = .28$, 5 per cent level at age 5); *specific fears* ($r = .31$, 5 per cent level at age 5). At age 12, mood swings in girls were correlated with *negativism* ($r = .52$, 1 per cent level) and *restless sleep* ($r = .36$, 5 per cent level). The boys at age 5 had five significant correlates; the girls had ten. At age 12, the boys had ten significant correlates and the girls had three.

In summary, age 11 represented the highest frequencies for both boys and girls in mood swings; the average per cent frequency over time was the same for both sexes. The first-borns of both sexes showed more moodiness. The striking finding is the age-sex differences in the number of behavioral correlates occurring at earlier and later ages. At age 5, the boys had five significant behavioral correlates with mood swings; the girls had ten. The boys' correlates were with *irritability, overdependence, attention demanding, somberness,* and *negativism;* the girls' were with *poor appetite* and a series of both acting-out and withdrawal patterns. At age 12, the picture was reversed, the girls having only three significant correlates (*restless sleep, negativism,* and *irritability*); whereas the boys had ten significant correlates, including both acting-out patterns (*lying, tempers, negativism*) and withdrawing ones (*somberness, overdependence, sensitiveness,* and *overmodesty*). The girls, using the number of correlates with moodiness as a criterion, seem pervasively uneasy at age 5; the boys less so and more overt in their patterns. By age 12, the girls seem more consolidated and less variable, whereas the boys appear to be under more strain. Under *food finickiness,* we first discussed the dilemmas of the dependence-independence struggle for the male. Variable mood appears to be but another symptom of the factors therein discussed.

SOMBERNESS

Somberness was added to the inventory list at age 3½. There are no consistent age trends. The boys hit their peak at age 5 (36 per cent) and a secondary peak at age 11 (30 per cent). Their lowest levels were at ages 3½ (5 per cent), 7 (11 per cent), 9 (9 per cent), and 14 (6 per cent). The girls' highest frequency was at age 6 (33 per cent) with ages 9 and 11 showing 26 per cent, and 12, 29 per cent which, unlike the boys, had dropped very little at 14. The only significant sex difference was at age 9 when the girls led 26 per cent to 9 per cent.

The non-first boys showed more somberness at eight out of ten age levels (although at no age was the difference significant). They earned an average per cent of 24.7 as against 15.3 for the first-born boys. Non-firsts were the major contributors to the frequencies at ages 7, 8, and 10.

The first-born girls were the somber ones, exceeding the non-firsts in eight out of ten age levels, significantly so at ages 8, 9, and 11. Their average for all age periods was 29.1 per cent as compared to 14.6 per cent of the non-firsts.

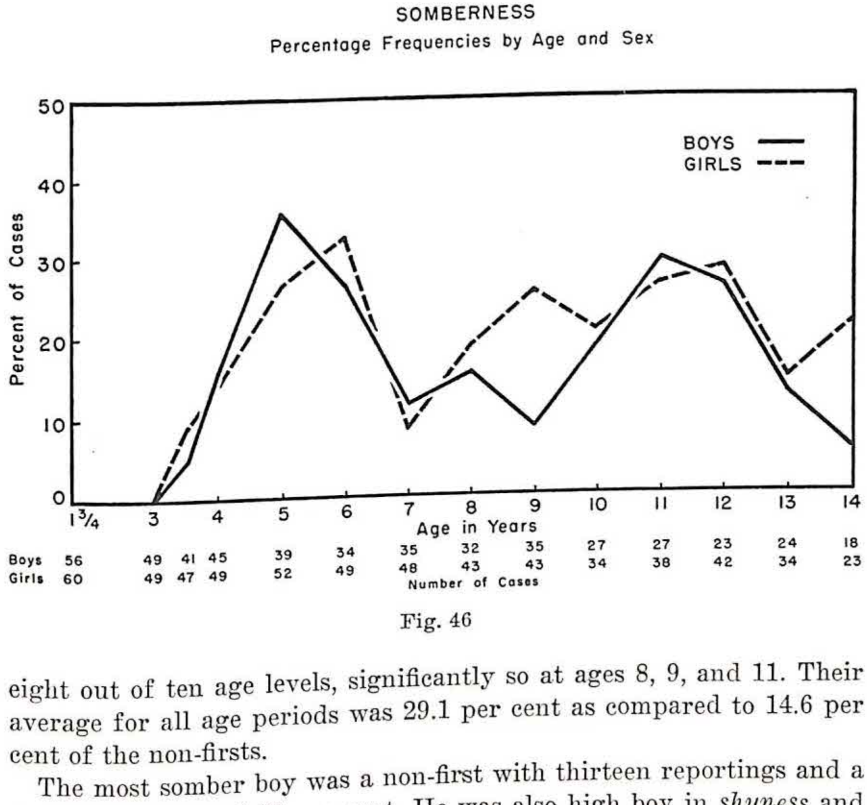


Fig. 46

The most somber boy was a non-first with thirteen reportings and a persistence score of 69 per cent. He was also high boy in *shyness* and had a score of 100 per cent in *temper tantrums*. He had two older brothers and a younger sister, which left him in a confused, ill-defined position. His mental test scores were consistently below the group average and his attitude usually that of a defeatist. His school reports showed phlegmatic reticence, inactivity, indifference, listlessness, and poor effort.

The most somber girl, 82 per cent, a first-born with eleven reportings, was also the most shy. These two traits appeared to have much in common. This girl was of Scandinavian extraction, as was the girl who was highest in *disturbing dreams*. She, like her family, had a tendency to expect the worst always. She was a tense and reserved girl who made few friends, but she was an excellent student and, after college, continued in graduate work.

Somberness was in the highest third of problems in persistency. Although its 5 to 14 interage correlation was only .20, for three-year periods its correlations were never lower than .42, and for five-year periods it had even higher interage correlations (7 by 12 years, $r = .53$ and 9 by 14 years, $r = .52$). Although it did not reach the high peaks of predictiveness that *overdependence* did, it showed more consistency and less variability. Behavior correlates were not available at ages 21 months or 3 years.

At 5 years, with the sexes combined, somberness shows eight significant correlations, only one at the 1 per cent level, but with the sexes separated (and the N's thereby reduced) the significant correlations rise to ten for the girls and two for the boys. In boys at 5 years, the correlates of somberness were *excessive reserve* ($r = .74$, 1 per cent level) and *mood swings* ($r = .34$, 5 per cent level). For girls at age five, at the 1 per cent level, the correlations were *excessive reserve* ($r = .67$), *mood swings* ($r = .57$), *insufficient appetite* ($r = .55$), *specific fears* ($r = .41$), *irritability* ($r = .52$), *temper tantrums* ($r = .37$), *oversensitiveness* ($r = .36$), and *overdependence* ($r = .35$); and at the 5 per cent level, *timidity* ($r = .33$), and *lying* ($r_t = .56$).

At 12 years, the boys rise from two (at 5 years) to four correlates with somberness. At the 5 per cent level, these are *mood swings* ($r = .49$), *tempers* ($r = .46$), and *negativism* ($r = .42$); and at the 1 per cent level, *excessive reserve* ($r = .81$).

At 12 years, the girls fell from the nine significant correlations at 5 years to four at the 1 per cent level, namely, *excessive reserve* ($r = .74$), *overdependence* ($r = .56$), *oversensitiveness* ($r = .52$), and *physical timidity* ($r = .56$).

Somberness was found to be related to *poor nutritional status* ($r = .35$) in girls at age 5 and to high I.Q. ($r = .44$) in boys at age 5. Five was the only age for which these relationships were computed. The correlation between somberness and *nutritional status* in boys was not significant ($r = .27$) but was in the same direction as for girls. The correlation between a high I.Q. and somberness in girls at 5 years was actually negative (−.13). See tables 16 and 19.

There are six ratings at age 5, the only age computed, of *mother's characteristics* to which somberness in the child is related. These are, at the 1 per cent level of confidence, dejected ("in the dumps") ($r = .39$), *nontalkativeness* ($r = .30$), *unpleasant facial expression*—sad or unanimated ($r = .29$); and at the 5 per cent level, *lack of confidence and poise* ($r = .23$), *mentally unalert* ($r = .23$), and *criticalness of child* ($r = .23$). This is certainly a combination of maternal characteristics in response to which somberness appears not unlikely. Our only surprise is that the correlations are not higher.

In summary, although the frequencies for somberness are not high, never more than a third of the group, persistency is in the higher third of all problems. Non-first-born boys were slightly more somber than first-borns whereas first-born girls were significantly more somber. The significant correlations are high (10) in girls and low (2) in boys at age 5. The girls drop at 12 in significant correlates and the boys rise. The correlates are with *excessive reserve, mood swings, negativism,* and *tempers*. Somberness appears as an irritable and angry resistance and avoidance pattern, partly copying the mother since it is associated with depressed, unhappy, insecure, and critical mothers.

NEGATIVISM

Negativism reached its highest levels of frequency between ages 3 and 6 and then receded steadily and rapidly for the girls. At no ages were there significant differences between boys and girls. Boys had their highest peaks at ages 3½ (42 per cent) and 5 (33 per cent), and after a drop to 11 per cent at age 7, rose to 22 per cent at ages 10 and 11. Their average per cent was 20.7. Girls had their highest peak at 4 (37 per cent), and from 7 on were down to around 10 per cent or less. Their average per cent was 16.1.

Negativism is an interesting combination of self-assertion, self-protection, and of resistance to excessive pressure. It occurred when training began before maturational levels permitted success (for example, in toilet training) and where quick-tempoed persons pushed slow-tempoed persons too fast.

Non-first-born boys showed, at nine out of twelve age levels, higher frequencies although at no age was the difference significant. Their average was 22.1 as compared to 16.4 for the first-borns. The first-born girls led in negativism at ten out of twelve age levels, two of which ages, 11 and 12, showed significant differences. Their average for all the age levels was 20.7 per cent as compared to 11.5 per cent for the non-first-borns.

The persistently negative among the girls were predominantly first-borns, though among the boys they were predominantly non-first-borns. The non-first girls showed the least negativism.

Eight-year-old girls and 11-year boys were most free from negativism. The only 8-year-old girls checked were first-borns, and the only 11-year-old boys were non-firsts.

The top boy, 100 per cent, was a non-first-born with a sister 18 months older and three younger siblings. His mother was eighteen when he was born; both parents had finished eighth grade, and during the depression there was acute financial strain. The father believed in working when he wanted to work and going hunting or fishing when he wanted to go hunting or fishing. This boy, too, resisted doing what he didn't want to do. This made it easy for him to stop school in the tenth grade and, with parental consent, join the Merchant Marines.

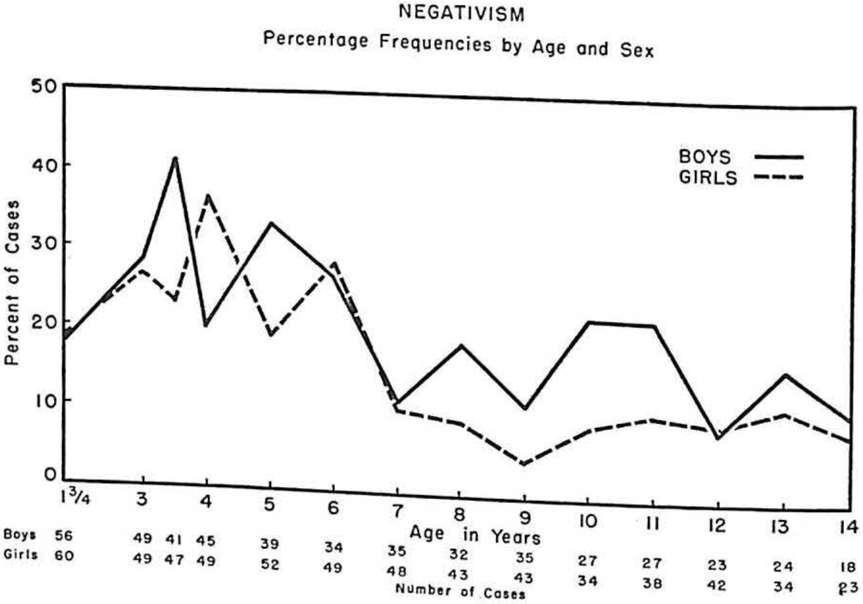


Fig. 47

The top girl, 83 per cent, was a first-born who was also top in *mood swings* and was discussed under that section. These two top children in persistent negativism fought their stormy ways through the early years with inadequate parental guidance and learned that resistance was their best defense in the face of erratic training.

Negativism showed no significant relationships to health, nutritional status, or intelligence, and none to rated characteristics in the mother. The behavioral correlates of negativism were many, especially for the boys, *overdependence* and *tempers* being the most persistent over time. For *overdependence*, the correlations are $r_t = .56^*$ at 21 months, $r_t = .23^{ns}$ at 3 years, $r = .33^*$ at 5, and $r = .57^{**}$ at 12. For *tempers*, the correlates are $r_t = .58^*$ at 21 months, $r_t = .63^*$ at age 3, $r = .40^*$ at age 5, and $.34^{ns}$ at age 12. Early *restless sleep* (r_t's $= .52^*$ and $.30^{ns}$ for 21 months and 3 years), *overactivity* ($r_t = .55^*$ at 21 months), and *poor enunciation* ($r_t = .51^*$ at 21 months). By 5 years, *irritability* ($r = .49^{**}$), *destructiveness* ($r = .43^{**}$), *mood swings* ($r = .32^*$), and *fears* ($r = .32^*$) were added; at age 12, *mood swings* had risen to a correlation of $.65^{**}$, *overdependence* was high ($r = .57^{**}$), as were *excessive reserve* ($r = .53^{**}$) and *overmodesty* ($r = .44^*$), *tempers* had dropped to just below an adequate significance level, *irritabilty* stayed up ($r = .73^{**}$), *lying* ($r = .55^{**}$) showed up, and *somberness* ($r = .42^*$) appeared. *Oversensitiveness*, which had a negative correlation with negativism at 5 ($r = -.32^*$), had a positive correlation at age 12 ($r = .37$) and, though the latter did not reach an adequate significance level, this shift is consonant with the picture of negativism as symptomatic in boys of angry dependence in a vulnerable and irritable organism. It appears to be both a protective and retaliative device.

In girls, the significant correlates of negativism are not as numerous nor as large. They have, for the four periods sampled, nine significant correlations to the boys' twenty. And whereas in girls negativism is associated with *tempers* ($r_t = .63^{**}$ at 21 months, $r = .30^*$ at 5 years, and $r = .30^{ns}$ at 12 years), *attention demanding* ($r_t = .64^{**}$ at 21 months), *timidity* ($r = .27^*$ at 5 years), *irritability* ($r = .29^*$ at 5), *oversensitiveness* ($r = .37^{**}$ at 5 and $.31^*$ at 12), *mood swings* ($r = .52^{**}$ at 12), and *excessive modesty* ($r = .30^{ns}$ at 12), negativism is not so tied to *overdependence*, with which it attains a significant correlation only at age 5. By 12 it is correlated with *irritability* ($r = .56^{**}$ as compared to the boys' $.73^{**}$) and nonsignificantly with *somberness* ($r = .16$ as compared to the boys' correlation of $.42^*$).

In summary, negativism for the girls was a pattern that had declined to a frequency of one out of ten at 7 years and occurred more frequently and persistently in first-born girls. In boys, it was slower in declining and occurred more frequently and persistently in the non-first-borns. It showed the fourth highest number of behavioral correlates, because of the heavy contribution of the boys who, with negativism, had thirteen significant behavior correlates to the girls' eight for the ages 5 and 12. It was more often associated with reactive and overdependent children, especially boys, who showed not only negativism but *tempers* and *destructiveness* early, and later more internalized patterns of anger in *moodiness and somberness.*

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* Significant at the 5 per cent level; ** at the 1 per cent level. $^{ns} > 5$ per cent level.

IRRITABILITY

This problem, dealing with marked overreactivity, largely physiological and tensional, did not show high frequencies, nor consistent age trends. The major peak was at 3½ for the boys (24 per cent) and age 4 for the girls (24 per cent). The low incidence age for both sexes was age 7 (6 per cent boys, 4 per cent girls) and a second major peak occurred at age 11 (boys 18 per cent, girls 13 per cent). The average for the whole age period was 13.2 per cent for the boys and 9.7 per cent for the girls. Only at one age (21 months) was there a significant difference, the boys excelling the girls.

Within the sexes, the non-first boy shows on the average higher reactivity as reported by the mothers (14.4 per cent versus 10.2 per cent). He leads in frequency in nine out of twelve age levels and significantly so at 21 months. It is the first-born girl who exceeds in irritability in average frequency (15.2 per cent versus 3.2 per cent for the non-first), and in the number of age levels at which she exceeds (12–0)—at two of these age levels significantly so. It was the first-born girl who contributed all the peak for girls at year 11.

Two of the boys with high scores were asthmatics. The top girl was a first-born, consistently rated as overactive, still wetting her bed at 12 years, emotionally immature, definitely underweight, and chronically showing a pattern of fatigue. At school she was characterized as distractable, thoughtless, and careless but very social and attention seeking.

The correlation between the second-year disease ratings and irritability was $r_{\text{bis}} = .49$ for the boys at age 21 months and .32 at 3 years. Poor health and birth order both appear to be contributing to the picture of overreactivity.

With regard to persistency, irritability showed high interage correlations (5 to 14, $r = .30$, the third highest of all the problems; 6 to 13, $r = .29$, also the third highest). For three-year spans, its interage correlations show little shift except that the 9 to 12 period is the lowest ($r = .29$). For five-year periods, the correlation is highest at 6 to 11 ($r = .63$) and lowest at 7 to 12 ($r = .31$), and again increases at 9 to 14

($r = .57$). Any combination of ages including 12, shows a drop in correlation indicating that year 12 is a year of changed irritability patterns in the face of adolescent and school changes, and that following 12, for example, in the 9 to 14 span, correlations again revert to previous higher relationships. In other words, children are reverting to previous patterns after a temporary upset.

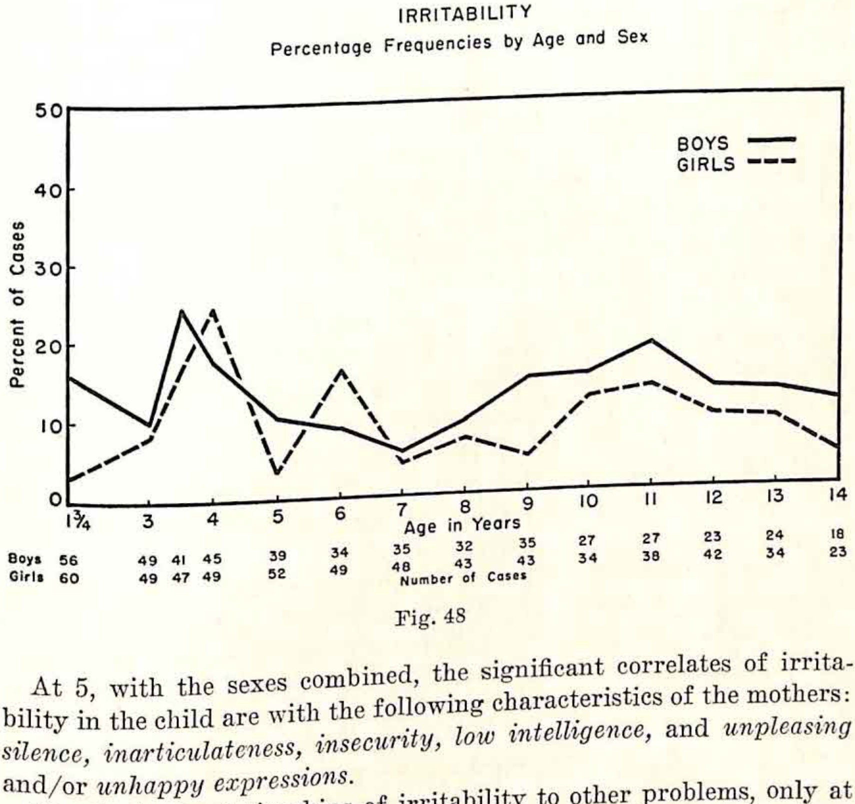

Fig. 48

At 5, with the sexes combined, the significant correlates of irritability in the child are with the following characteristics of the mothers: *silence, inarticulateness, insecurity, low intelligence,* and *unpleasing* and/or *unhappy expressions.*

We obtained relationships of irritability to other problems, only at the 5- and 12-year levels. At 5 years, with the sexes combined, eleven significant correlations were found, the highest for any problem. These are, in order of magnitude and at the 1 per cent level of confidence: *mood swings* ($r = .59$), *negativism* ($r = .39$), *overdependence* ($r = .38$), *temper tantrums* ($r = .38$), *attention demanding* ($r = .36$), *insufficient appetite* ($r = .35$), *somberness* ($r = .29$), *timidity* ($r = .29$), and *fears* ($r = .28$); and at the 5 per cent level, *destructiveness* ($r = .26$), and *thumbsucking* ($r = .23$).

With the computations for the sexes separately determined, the correlations show five significant correlations for the boys—two at the 1 per cent level of confidence, namely, *mood swings* ($r = .55$) and *negativism* ($r = .49$), and three at the 5 per cent level, namely, *destructiveness* ($r = .39$), *excessive dependence* ($r = .35$), and *attention demanding* ($r = .31$), all of which are still significant at age 12.

At age 12, the boys show twelve positive and significant behavioral correlates with irritability and the girls show six. The correlations with irritability for the boys are, in order of magnitude: *negativism* ($r = .73$), *mood swings* ($r = .70$), *lying* ($r = .67$), *disturbing dreams* ($r = .60$), *tempers* ($r = .60$), *jealousy* ($r = .60$), *food finickiness* ($r = .58$), and, at the 5 per cent level, *excessive reserve* ($r = .48$), *excessive dependence* ($r = .47$), *attention demanding* ($r = .44$), *oversensitiveness* ($r = .44$), and *excessive modesty* ($r = .43$). It is clear that the late pubescent boy is an irritable and somewhat confused organism, using both acting-out and internalizing behaviors.

For girls at age 5, there are eleven significant correlations, in contrast to the boys' five, with irritability, eight at the 1 per cent level which are, in order of magnitude: *mood swings* ($r = .63$), *somberness* ($r = .52$), *tempers* ($r = .49$), *insufficient appetite* ($r = .46$), *timidity* ($r = .44$), *specific fears* ($r = .43$), *excessive dependence* ($r = .41$), and *excessive attention demanding* ($r = .40$); additionally, at the 5 per cent level, *excessive reserve* ($r = .33$), *nailbiting* ($r = .32$), and *negativism* ($r = .29$).

At age 12, the girls show a marked drop from year 5 in the number of significant correlates of irritability from eleven positive correlations to six, in contrast to the boys' upswing, which we have seen on several other problems as well. Four of the significant correlations at age 5 dropped below significance levels and four were retained at the 1 per cent level at year 12, namely, *negativism* ($r = .56$) which was an increased correlation over age 5, *mood swings* ($r = .50$) continued, and *tempers* ($r = .43$); and *attention demanding* ($r = .41$), *jealousy* ($r = .42$), and *restless sleep* ($r = .40$) come into the picture. The correlates of irritability for girls at 12 appear to be more acting-out behavior and less the internalized, unhappy dependence patterns that they were found to be at age 5.

In summary, irritability had its greatest frequency at ages 3½ and 4, but reached secondary peaks at age 11 for both sexes. The early period is one of infectious diseases; the later one occurs at the time of physiological changes of late pubescence. Boys showed more irritability on the average, but only significantly so at 21 months. Non-first-born boys showed slightly more irritability, whereas it was the first-born girl who consistently, over the age span, showed more irritability than the non-first girl. Irritability is related in the early years to health and to unhappy, insecure, inarticulate, and not-too-bright mothers. Irritability is among the top three problems in persistence. It shows the highest number of correlates of any problem for year 5 (the high for girls) and year 12 (the high for boys). Boys show five significant behavioral correlates with irritability at age 5, whereas girls show eleven, their high for all problems. At age 12, boys show twelve correlates and girls show six. At age 5 for girls and at age 12 for boys, these correlates are obtained both from acting-out and from withdrawing behaviors and lead to the hypothesis that, at these periods, the youngsters are under tension and have not established stabilized patterns or have had them disrupted. At age 12, the girls appear more settled in their patterns and under less tension than earlier, whereas the boys appear not only more disrupted but have reverted back to pre-five-year patterns. We need more detailed information than our inventory method can give to account for these major age-sex differences and more analyses of data for the intervening years before we can do more than guess at the critical factors. One of the thoughts that occurs is that mothers, drab and unhappy and not too bright, may have more effect early on the more home-confined girl who has less chance to escape than has the boy. The independence-dependence problems for the boy may also be in part related to the kind of mother from whom he is trying to break free. Another hypothesis is that girls have begun their shift over to overt conformity patterns and to greater internalization at age 5; and the boys, permitted by the culture a longer period of overt aggressiveness, do not begin to internalize heavily until much later when they, too, show the strains experienced earlier by the girls.

TEMPER TANTRUMS

Temper tantrums declined from year 3 for both boys and girls but at a slower and more steady rate for boys. The difference between boys and girls seems based upon a combination of a higher energy level and greater motility in the boys, plus the greater cultural acceptance of aggressive overt behavior for the male. The boys' frequency for temper explosions is still above 50 per cent up to and including age 9, whereas the girls' is down to around 30 per cent by that age. At ages 5 and 8, the sex differences are significant because more girls have given up overt tempers and have substituted *oversensitiveness,* whereas the boys are still slugging it out. The average per cent for the boys for all age levels is 50.6; for the girls, 37.6. The girls' highest peak is age 3 (63 per cent) and, after a drop, two upswings occur at ages 6 (51 per cent) and 7 (56 per cent), and again after a drop, go up again slightly at 11 (34 per cent).

TEMPER TANTRUMS
Percentage Frequencies by Age and Sex

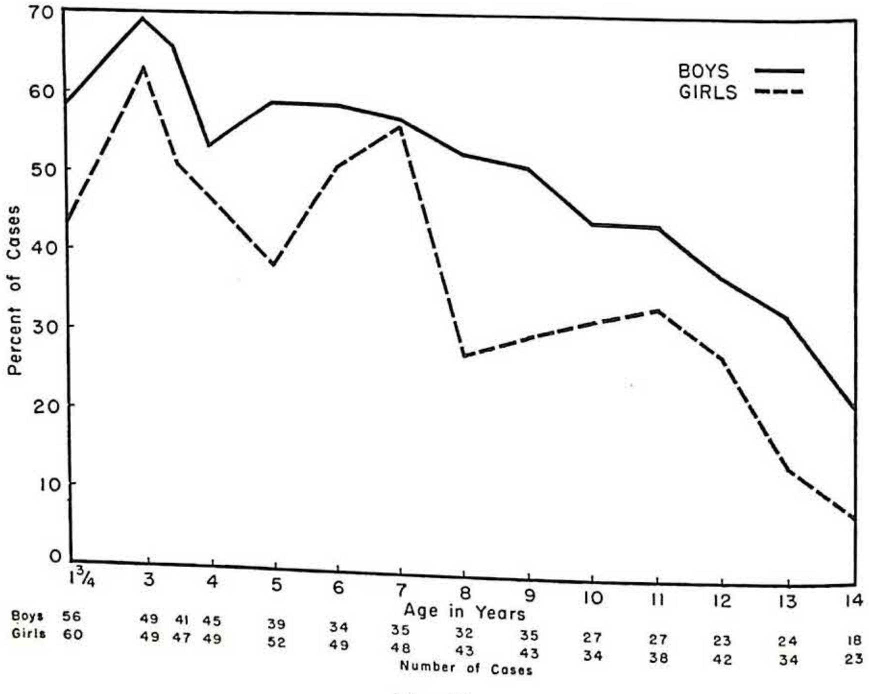

Fig. 49

Non-first-born boys show higher frequencies in nine out of twelve of the age periods and all the age periods from 6 on, although only at age 13 is the difference statistically significant (50 per cent versus 10 per cent). The average per cent for non-first-borns is 56.3 and for first-borns is 46.8. Of the six boys who had temper explosions reported at each age period, only one was a first-born. He was a boy with a broken home and many and continuous frustrations.

For girls, it was the first-born who had the higher frequencies at nine out of twelve age levels, although the differences were significant only at ages 8 and 11. The average per cent for first-born girls was 44.9 as against 32.3 for non-firsts.

This behavior was persistent (checked at 50 per cent of visits) for 58 per cent of the boys and 35 per cent of the girls. All the boys who had persistent problems of *food finickiness* and *speech* also had persistent tempers. The same patterns did not hold for girls.

For a number of children, tantrums tapered into *oversensitiveness, mood swings,* or *excessive reserve.* At age 14, 22 per cent of the boys and 9 per cent of the girls were still clinging to tantrums as a pattern.

The high girl, 100 per cent, was a first-born. She also had a high score in *poor appetite* and was a persistent nailbiter. She was a tense girl of slight build who was under heavy parental pressure for academic achievement, especially by her organized, efficient mother who had little understanding of mediocrity.

Of the eleven problems with large enough frequencies from 5 years on to compute interage correlations, tempers were fourth from top in magnitude of correlation (ages 5 by 14, $r = .22$) which is not actually high, only relatively so. The shorter age periods are of interest. Using three-year intervals, the highest correlations occur at the higher age level (11 by 14, $r = .65$), whereas the correlation between ages 5 and 8 is only .30. Using five-year intervals, the highest correlation is .58 (8 by 13 years), and the lowest is .27 (6 by 11 years). These figures mean that although persistency is relatively low for the long age period, temper explosions or their absence become more stabilized patterns with age.

A correlation of .41 was obtained at 21 months between tempers and *illness* in girls, but a –.05 was obtained in boys, perhaps indicating that temper in girls is a less acceptable pattern culturally and is a component of illness, whereas boys have their temper without the excuse of illness. There were no high correlations between the rated characteristics of the mother and tempers; the highest, at the 5 per cent level, was *poor verbal expression;* and slightly greater than the 5 per cent level was *lower intelligence* in the mothers. There was a significant correlation at 21 months between *low intelligence* in the boys and tempers ($r_{bis} = .52$) but not at other age levels and not for girls.

At the 5-year age, with the sexes combined, eight behavioral correlates were obtained. With the sexes separated at age 5, girls had seven significant correlates and boys one. At age 12, the boys had six and the girls had four significant correlations with tempers.

In boys at 21 months, tempers were related to *disturbing dreams*

($r_t = .54$) which increased at age 3 ($r_t = .82^{ns}$), and at 12 still remained significant at the 5 per cent level ($r = .41$). *Restless sleep* was associated with tempers at 21 months ($r_t = .43^*$) and at age 3 ($r_t = .90^{ns}$), and at 12 was not significant ($r = .32$). Tempers were associated with *excessive dependence* at 21 months ($r_t = .47^*$) and at 3 years ($r_t = .90^{ns}$), but had fallen below an adequate significance level at years 5 ($r = .04$) and 12 ($r = .29$). Tempers were correlated with *negativism* at 21 months ($r_t = .58^*$), at 3 years ($r_t = .63^*$), at 5 years ($r = .40$, 5 per cent level), and was below an adequate significance level at age 12 ($r = .34$). No problem was associated significantly at all four ages with temper although *overdependence* and *negativism* had the most consistent relationships. *Retarded speech* had a significant relationship at 21 months but never thereafter. *Mood swings* ($r = .49$, 5 per cent level) and *jealousy* ($r = .50$, 5 per cent level) entered the picture as correlated with tempers at 12 years, as did *food finickiness* ($r = .45$, 5 per cent level), *somberness* ($r = .46$, 5 per cent level) and *irritability* ($r = .60$, 1 per cent level).

For girls, the highest number of significant correlates was at age 5 when seven significant relationships occurred with tempers (to the boys' one) whereas there were four for girls at age 12. The correlates are *irritability* ($r = .49$, 1 per cent level at age 5) which continued at age 12 ($r = .43$, 1 per cent level), *overdependence* ($r = .42$, 1 per cent level at 5 years), *destructiveness* ($r = .41$, 1 per cent level) which appeared neither before nor after 5, *insufficient appetite* ($r = .40$, 1 per cent level at age 5) which also was significant at 12 ($r = .37$, 5 per cent level). *Somberness* appears correlated with tempers ($r = .37$, 5 per cent level) only at age 5. *Negativism* is related to tempers at 21 months ($r = .63^*$) and at both 5 and 12 years ($r = .30$). *Attention demanding* ($r_t = .57$ at 21 months and $r = .35$ at 12 years) was correlated with tempers in girls. Tempers were also correlated with *fears* at 21 months ($r_t = .44$) and at 5 years ($r = .29$, 5 per cent level) and *restless sleep* ($r = .32$, 5 per cent level) at 12 years. Although girls had appreciably lower percentage frequencies of tempers than boys did, they had more significant behavioral correlates (eleven to seven).

In summary, tempers declined with age. More of the boys showed this pattern than girls and more of the non-first-born boys and more of the first-born girls. There was relatively low stability of patterning in the early years, but, with increasing age, the characteristic pattern in expression or control of anger became more predictive. Tempers were related to *illness* and *poor nutritional status* in girls. Tempers had more significant behavioral correlates in girls, especially at age 5 (seven to one), than in boys in spite of higher frequencies in boys. The most significant of the correlates for boys early were *restless sleep, disturbing dreams, overdependence,* and *negativism;* and at 12 years, *moodiness, somberness, irritability,* and *jealousy*. For girls it was associated with the same problems early but not so strongly later, nor with as many problems (at age 12, only with *restless sleep, insufficient appetite, irritability,* and *attention demanding*). It appears partly a reaction to poor health and/or frustration and partly a coping device culturally more acceptable in the male. It appears more symptomatic of disturbance in the girl than in the boy, at least in the early years.

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* Significant at the 5 per cent level; $^{ns} > 5$ per cent level. Nonsignificance of these high tetrachoric correlations, which probably never should have been computed, is due to extreme imbalance in the arrays.

JEALOUSY

For reported jealousy there appears to be no consistent age trend for either boys or girls, although the girls' peaks decline—40 per cent at age 3½, 38 per cent at age 5, 33 per cent at age 7, 35 per cent at 10, and 31 per cent at 12. The boys' peaks increase—36 per cent at age 5, 44 per cent at age 8, and 48 per cent at age 11. Variability marked the picture.

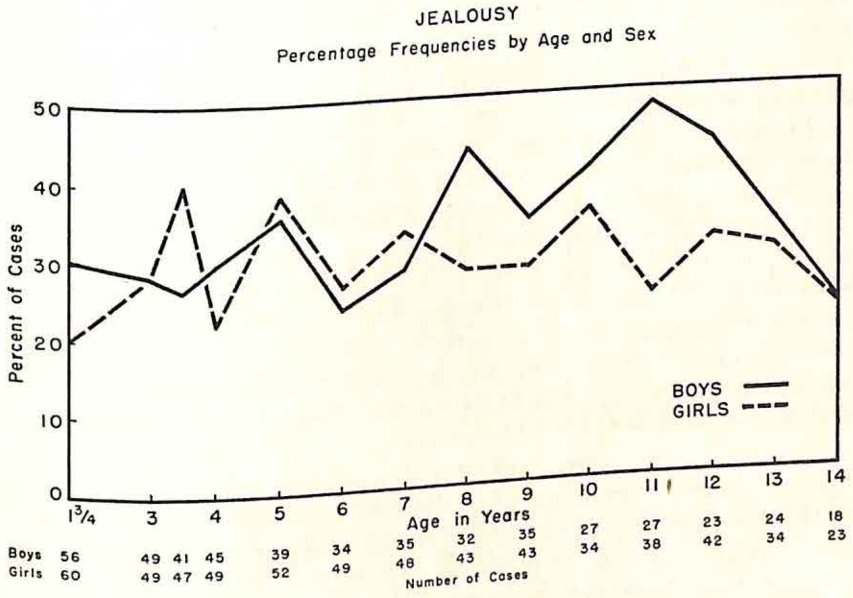

Fig. 50

Many studies have reported more jealousy in girls than in boys at the preschool years, and our intensive group is so reported, but this did not hold for this group at the preschool level, using our method of inventory checking, save at year 3½; at later years, 8 to 13 inclusive, the boys excelled the girls. The average per cent for ages 8 through 13 was 40.6 for boys, 29.1 for girls. In checking this to see if "only" girls were more frequent than "only" boys, we found they lead 17 to 8, but one-fourth of the "only" girls showed persistent jealousy and none of the "only" boys did, so a difference in onliness does not appear to be influencing these sex differences. This may mean that girls have learned to internalize and/or to be more indirect in respect to affectional competition, and boys are more overt and gross and, therefore, more apparent. At all events, these figures are out of line with both the cultural stereotype and frequencies reported from other studies.

There is little or no difference in the frequency of jealousy between first- and non-first born boys, the average per cents for the entire age being 34.5 per cent and 35.9 per cent, respectively. At one age level, 21 months, the non-firsts contribute significantly more. In the girls, birth-order differences are greater. In ten of the twelve year levels, first-born girls excel in reported jealousy, although at no age are these differences significant. Their average over time is 32.9 per cent as contrasted to 24.2 per cent for the non-firsts. As a persistent pattern, among the boys there were 35 per cent first-borns and 31 per cent non-firsts; among the girls, 37 per cent first to 16 per cent non-first.

The top boy, 100 per cent, was a non-first with a sister 8 years his senior. The sister was happy and successful at school, had many friends, and was approved at home. The boy's mental test scores were always below the group average. His school reported that he was withdrawn, spoiled, serious, poorly adjusted, and "terribly slow." Jealousy was one of his eight persistent problems. Some of these were no doubt related to his poor physique and poor coördination.

The top girl, 100 per cent, was a first-born with a sister 21 months younger than she. This girl had a loss of hearing with resulting speech defect, was conscientious and dependable, whereas the sister was gay and carefree. The contrast was intensified by the fact of a broken home and the mother's dependence on the older girl who could not let her mother down but was constantly irritated by her younger sister who was having all the fun and taking no responsibility.

Jealousy measures on persistence are available from 7 through 14 years. For that span, it is in the highest third ($r = .49$) of 18 problems.

The three-year spans show no increasing predictiveness with age, the correlations being for age 7 to 10, .47; for 8 to 11, .47; for 9 to 12, .44; for 10 to 13, .45; and for 11 to 14, .33. The five-year spans show a higher correlation between 7 to 12 ($r = .55$) than for 8 to 13 ($r = .43$) or for 9 to 14 ($r = .46$).

Of the behavioral correlates of jealousy, none reached an adequate significance level at ages 21 months or 3 years although *attention demanding* approached it in boys ($r_t = .43$ at 21 months and .42 at 3 years). In girls at 3 years, the highest, although not significant, correlates with jealousy were *overactivity* ($r_t = .49$), *poor enunciation* ($r_t = .47$), and *timidity* ($r_t = .43$). Jealousy in boys at age 3 was related to *illness* ($r_{bis} = .41$, 5 per cent level). It was not related to I.Q. or the ratings of the mothers.

At 5 years in boys, no significant correlates occurred with jealousy, and none even approached the magnitude of significance. By 12 years, the boys had eight significant correlates. They were, at the 1 per cent level, with *food finickiness* ($r = .71$), with *lying* ($r = .63$) and with *irritability* ($r = .60$); and at the 5 per cent level, *tempers* ($r = .50$), with *mood swings* ($r = .47$), with *oversensitiveness* ($r = .46$), with *insufficient appetite* ($r = .46$), and with *attention demanding* ($r = .42$). They present largely a picture of irritable attention demanding of a tense moody boy.

The girls had two 5 per cent level correlates at age 5: *attention demanding* ($r = .32$) and *mood swings* ($r = .30$). In contrast to the boys' eight behavioral correlates with *jealousy* at age 12, the girls had but three positive correlations, namely, *excessive dependence* ($r = .51$, 1 per cent level), *irritability* ($r = .42$, 1 per cent level) and *excessive modesty* ($r = .35$, 5 per cent level). They had one 5 per cent level negative correlation with jealousy, namely, *nailbiting* ($r = -.36$). The jealous girl literally was *not* chewing her nails. The contrast in the boys and girls in the number and magnitude of correlates again reinforces the fact that age 12 is a period of tension for boys. To the question of why jealousy should be in this matrix of tension, we have no clear answer. At 12, it occurs in almost half of the second-born boys, which suggests that in this period, which seems to be marked by a dependence-independence conflict, an older and more independent sib is an additional threat. Further, it appeared in a number of reports that second-born boys vocalized resentment of an older sister in whose clothes and social status needs, the mother was heavily involved.

In summary, the girls show more jealousy at 3½ years, the boys more from 8 through 13 years. The first-born girls exceed the non-firsts. Jealousy was among the top third of the problems in persistency. It showed a relationship to *illness* at age 3 in boys. The most striking set of facts concern the higher frequency of jealousy in boys after 8 and the large number of behavioral correlates in boys with jealousy at age 12, in contrast to the girls—eight for boys to three positive ones for girls; whereas, at the early age of 5, it was the boys who had none. The jealous boy at 12 is a tense, moody, somber boy who irritably demands attention, whereas the girl seems less disturbed although she is overdependent and negativistic.

EXCESSIVE COMPETITIVENESS

Excessive competitiveness was added to the data collection at age 7, but the data yielded were very meager and, we believe, not valid. The materials were not graphed (see table 3) for reported frequencies. Only a few children were involved in this item, which we do not believe to be true, nor do we believe that the obtained averages of 8.1 per cent for boys and 5.1 per cent for girls are accurate. Perhaps in mothers' eyes in a competitive culture there is no such thing as excessive competitiveness. Non-first-born boys lead on the average in excessive competitiveness 12.2 to 5.4 per cent. The girls showed no differences. Behavioral correlations were precluded because of low reported frequencies.

EXCESSIVE RESERVE

This behavior was not systematically sought until age 5 so little can be said about age trends. The frequency figures for the boys were 41 per cent for the years 5 and 6; they dropped to figures ranging from 19 per cent to 26 per cent during years 7, 8, 9, and 10 and then jumped to their highest peak—namely, 52 per cent at age 11—and receded to 17 per cent by age 14. The figures for the girls remained high (37 per cent to 47 per cent) from ages 5 through 9 when the boys' had dropped, which resulted in significant differences between boys and girls at ages 7, 8, and 10, the latter being the peak for the girls (59 per cent) whereas the boys' peak was at age 11 when the girls had begun to drop to a low of 24 per cent at age 13.

In regard to birth order, the average per cents for boys for age 5 through 13 are similar, 31.6 per cent and 32.3 per cent. First-borns were higher in reserve at ages 5, 9, and 13; non-firsts at the other age levels. For girls, the differences are greater. The average frequency for first-born girls is 44.2 per cent and for non-first-borns, 37.8 per cent. The first-borns excel at six out of nine age levels, significantly so at age 9, the lowest frequency for the non-firsts.

Eighty-eight per cent of the girls had at least one check for excessive reserve, and 40 per cent of them had checks on at least 50 per cent of their clinic visits. Seventy-six per cent of the boys had at least one reserve rating, and 24 per cent were persistent in this trait. Among these persistently reserved boys, all but two had substantial *tantrum* scores.

EXCESSIVE RESERVE

Percentage Frequencies by Age and Sex

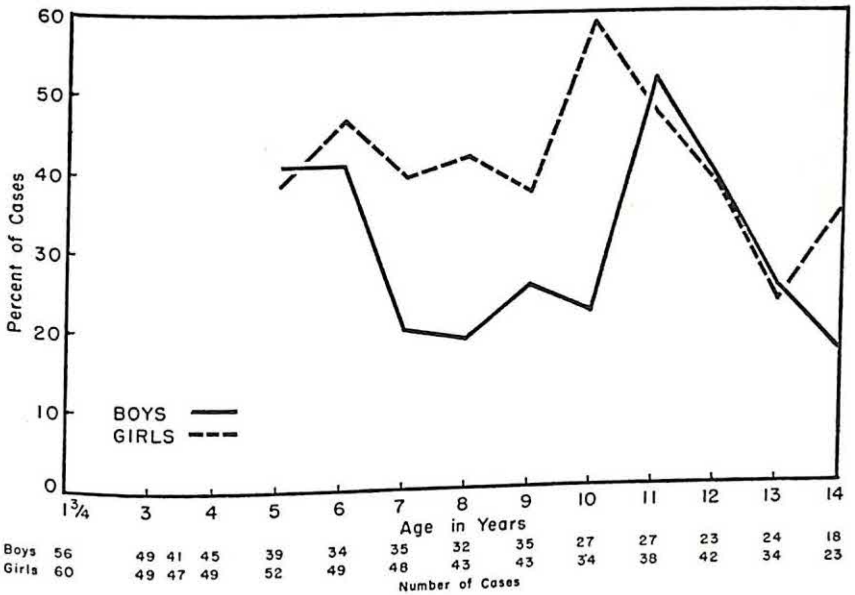

Fig. 51

The girls showed more diversification. The three who had persistent *speech problems* were also characteristically reserved. Some who were reserved were nailbiters, some majored in tantrums, some were fearful. Only one girl had a high score in this trait and no other persistent problem score. No characteristically reserved girl had been a persistent thumbsucker.

The top boy, 100 per cent, was a non-first-born who was also top in *food finickiness*. He had an older brother and sister and two younger brothers. His father died when he was 10 years old. There had been financial strain even before the depression years.

There were three top girls, 100 per cent. Two were first-borns and one non-first. One of the first-borns was also high girl in *shyness* and *somberness.* Both first-borns had younger brothers who were not reserved.

The non-first girl had an older sister and brother, and was high girl in *emotional dependence.* Her mental test scores were consistently below the group average. The first years of school were very difficult for her; she was immature, so very timid and meek that she preferred to stay at home and often did so. Social adjustment improved in high school, and she held an office job after graduation.

The continuum of excessive reserve and nonreserve was in the top fifth in persistence for the period 7 to 14 ($r = .42$), showing that it was more predictive than four-fifths of the problems. Each three-year span from 7 to 10 on, shows increasing interage correlations. It had the highest predictive power of any behavior for 9 to 14 years ($r = .60$) which, incidentally, was higher than for any three-year period.

For the relationships of excessive reserve to other problems, we have no data available before age 5. At that age, boys showed two significant correlates, namely, *somberness* ($r = .74$, 1 per cent level) and *physical timidity* ($r = .35$, 5 per cent level), whereas the correlates rose to seven at year 12. These were, at the 1 per cent level, *somberness* ($r = .81$), *mood swings* ($r = .62$), *overdependence* ($r = .54$), and *negativism* ($r = .53$); and at the 5 per cent level, *irritability* ($r = .48$), *oversensitiveness* ($r = .47$), and *excessive modesty* ($r = .45$). This is a picture of a somber, moody boy, both concerned about his body and simultaneously resistive and dependent.

In contrast to the boys, the girls showed five significant correlates to the boys' two at age 5, and at age 12 had four to the boys' seven. Their five-year correlates with excessive reserve are *somberness* ($r = .67$, 1 per cent level), *insufficient appetite* ($r = .47$, 1 per cent level), *mood swings* ($r = .32$, 5 per cent level), *irritability* ($r = .33$, 5 per cent level), and *oversensitiveness* ($r = .28$, 5 per cent level). At 12, they still showed *somberness* ($r = .74$, 1 per cent level) and *oversensitiveness* ($r = .35$, 5 per cent level), but *insufficient appetite, mood swings,* and *irritability* had dropped out; *physical timidity* ($r = .50$, 1 per cent level) and *overdependence* ($r = .37$, 5 per cent level) had entered the 12-year picture.

At age 5, there was in girls a significant relationship to *poor nutri-*

tional status ($r = .31$, 5 per cent level), and at the one age that data were available, namely, age 5, reserve was found to be associated with the following mothers' rated characteristics: *dejection* ($r = .35$, 1 per cent level), *insecurity* ($r = .33$, 1 per cent level), *silence* ($r = .27$, 1 per cent level), *unpleasant facial expression* ($r = .22$, 5 per cent level), and *uncoöperativeness* ($r = .21$, 5 per cent level).

In summary, reserve showed no consistent age trends, but early (by 5) and late (ages 10 and 11) peaks. Girls exceed boys on the average; first-born girls exceed non-firsts. Reserve shows considerable persistence in comparison to other patterns. Girls had more correlates with reserve early, boys had somewhat more later. In the boy, reserve was associated with *physical timidity* and *somberness* early, later with *moodiness, excessive modesty, negativism,* and *overdependence.* In the girls, the correlates were similar except for the age of occurrence. The reserved children had reserved and insecure mothers.

UNSELF-RELIANCE

Unself-reliance was another item added late. The frequencies were not graphed but appear in table 3. For the ages 7 to 13 the frequency figures declined for the girls from age 7 on, when 29 per cent were so listed. The boys did not decline as rapidly although at no age levels were differences significant between the two sexes. The average of the per cents for the eight year levels was 17.5 for the boys and 11.1 for the girls. With respect to first- and non-first-born differences, none was significant at any age level. The average for the first-born boys was 17.2 per cent as compared to 20.0 per cent for the non-firsts. For the girls, only first-born were listed as having this problem after 9 years, the averages being 15.8 per cent for first-born girls and 8.1 per cent for non-firsts. Behavioral correlations were not available.

VII. SUMMARY OF FINDINGS ON AGE CHANGES AND SEX DIFFERENCES IN PROBLEM BEHAVIOR

IN THIS CHAPTER, age changes and sex differences in the percentage of children exhibiting the various behavior patterns will be discussed in an over-all way for all the behavior problems inventoried. The percentage of boys and girls whose mothers report the presence of behavior included in the "problem" category is reported in table 3 and figures 25 to 52.

AGE CHANGES IN PROBLEM INCIDENCE

Consideration of the figures showing age changes leads us to a rough grouping of the behaviors into those which show (1) a decreasing incidence, (2) increasing incidence with age, and (3) the peak age period during the preschool years or during pubescence or both. The problems which have a rapid decrease in incidence are the problems which are related to biological controls: *soiling* and *diurnal* and *nocturnal enuresis.* The age changes in these problems suggest the importance of maturation and training. Another infantile problem which decreases in frequency but much more slowly than the problems of elimination is *thumbsucking*. This problem often brings such satisfaction to the youngster and peace to the family that it is discarded with reluctance and usually only with social pressure from the family, and later, from friends. There are three other problems which show a predominantly decreasing incidence after the early preschool years and these are *destructiveness, temper tantrums,* and *overactivity.* These overt expressions of energetic aggression are controlled more rapidly by the girls than by the boys, probably because boys have a higher energy level and are under less social pressure for control. Another problem showing a decreasing frequency with age is *"speech problems,"* largely enunciation, which depends for its control on maturity and experience.

The one problem which shows an increasing incidence during the entire age period is *nailbiting*. However, the girls were beginning to give up this habit after 11 years. Whether or not a trend with age will be found depends of course on the age range studied. If data collection on *nailbiting* had continued even to 16 years, a decline in incidence would probably have been found in line with previous studies on *nailbiting* which show a pubescent peak.

A number of behavior patterns have both upward and downward

AGE CHANGES IN THE INCIDENCE OF TEMPER TANTRUMS (—) AND OVERACTIVITY (---)

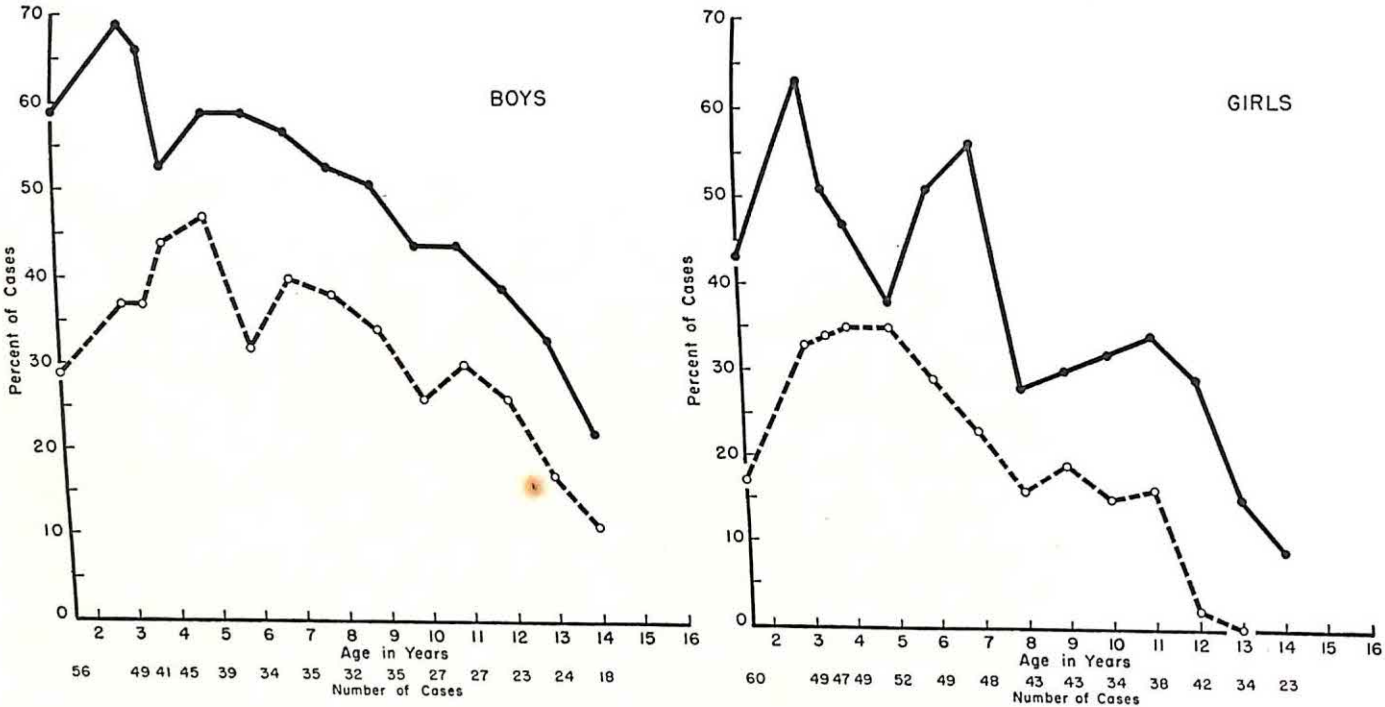

Fig. 52

AGE CHANGES IN THE INCIDENCE OF THUMBSUCKING (—) AND NAILBITING (---)

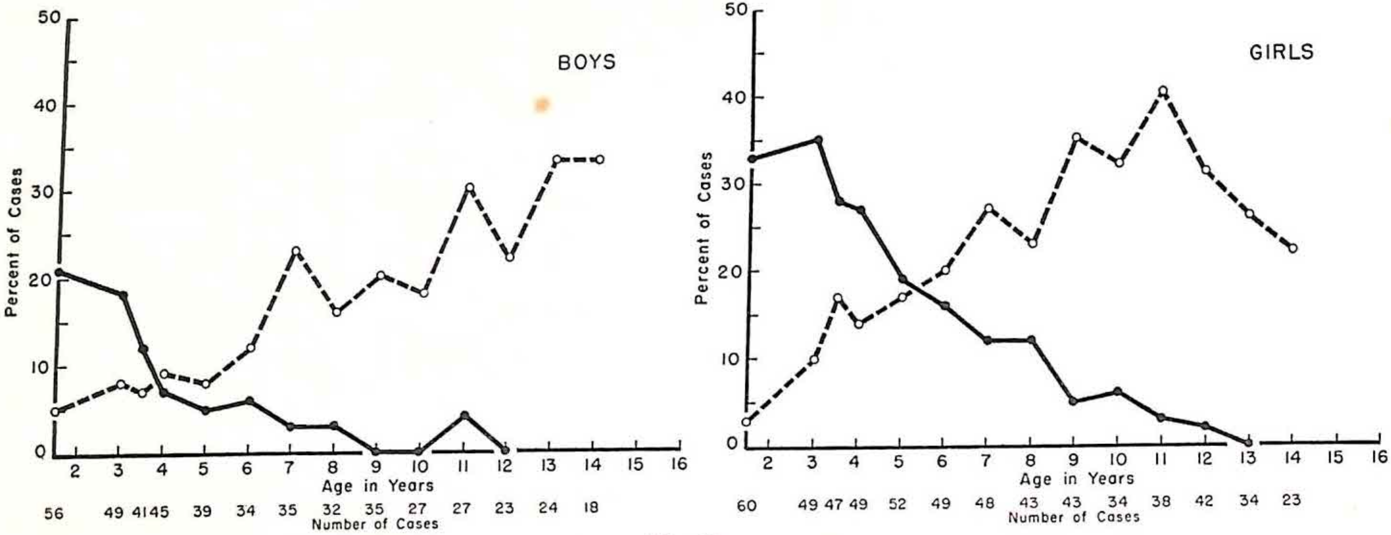

Fig. 53

trends within the age period 21 months to 14 years. *Insufficient appetite,* for example, is seldom a problem before the beginning of the fourth year or after the ninth year. Ages 4, 5, and 6 are the years of highest incidence. *Food finickiness,* on the other hand, shows a gradual decline in incidence except for a higher peak in girls at age 6, and a resurgence for both sexes at 12 years. It is difficult to account for the fact that *lying* shows age changes which are very similar to *insufficient appetite* although of greater magnitude, with peak incidence during the age period 3½ to 6 years. If we were given to analogical excesses we might say that the child figuratively closes his mouth to food and begins using it for more imaginative purposes. A more likely hypothesis is that a below par child whose appetite is poor probably has more need to fend off training pressures with evasion.

The incidence of certain personality characteristics appears related to periods of stress in the child's life. *Emotional dependence* is most prevalent during the years of first experiences at school and at late pubescence. The problem of *excessive somberness* shows even more marked peaks at ages 5 and 6 years, and again at ages 11 and 12 years. Peak years for the incidence of *attention demanding* are 4 and 10 years in girls. The high incidence of negativism in the preschool period has been frequently reported. In this group, we find a reoccurrence of this problem at 10 and 11 years among boys.

One of the most impressive facts about the age changes is that many or even most of the personality problems have two age peaks, one during the preschool period and one during pubescence (*restlessness in sleep, disturbing dreams, physical timidity,* and *irritability*). There are other problems which have peaks at the time of school entrance and then again when changing from elementary to junior high school and even in late pubescence (*jealousy* in boys and *somberness* in both sexes).

Age-Peak Frequencies of Problems

A review of the ages of highest incidence (or first highest incidence when more than one peak occurs) throws light upon four aspects: (1) the developmental levels of problems; (2) the periods of tension and strain; (3) the emerging of coping devices or expressive devices; and (4) sex differences in the ages at which the various problems emerge in force (see table 5).

At the early months, *elimination controls, speech retardation,* and *thumbsucking* had top listing.

By age 3½, peak frequencies of expressive and aggressive behavior

TABLE 5

Ages at Which Peak Percentages of Incidence for Individual Problems First Occur in Either Sex

Age and problem	Boys		Girls		Boys*			Girls*		
	Peak	Per cent	Peak	Per cent	Peak	Age	Per cent	Peak	Age	Per cent
1¾ years										
Nocturnal enuresis	+	75	+	73	..	..	..	..	..	..
Diurnal enuresis	+	62	+	43	..	..	..	..	..	..
Soiling	+	32	+	20	..	..	..	..	..	..
Restless sleep	+	38	+	27	..	..	..	..	..	..
Speech problems	+	30	−	17†	..	..	24†	+	3	18
Thumbsucking	+	21	−	33†	..	..	18†	+	3	35
ATTENTION DEMANDING	−	20†	+	27	+	4	27	..	..	18†
3 years										
Temper tantrums	+	69	+	63	..	..	..	..	..	..
Specific fears	−	43†	+	67	+	3½	56	..	..	60†
Food finickiness	+	37	−	43†	..	..	29†	+	6	51
Physical timidity	+	31	−	24†	..	..	24†	+	3½	38
DESTRUCTIVENESS	−	20†	+	20	+	5	28	..	..	10†
Stealing	+	12	+	18	..	..	..	..	..	..
3½ years										
Negativism	+	42	−	23†	..	..	20†	+	4	37
JEALOUSY	−	27†	+	40	+	11	48	..	..	24†
Irritability	+	24	−	17†	..	..	18†	+	4	24
EXCESSIVE MODESTY	−	7†	+	26	+	11	30	..	..	13†
4 years										
Poor appetite	+	31	−	29†	..	..	29†	+	6	37
Excessive dependence	+	27	−	14†	..	..	3†	+	7	27
LYING	−	33†	+	49	+	6	53	..	..	49†

5 years										
Overactivity	+	46	+	35	..	..	..	..	..	..
Somberness	+	36	−	26†	..	..	26†	+	6	33
6 years										
OVERSENSITIVENESS	−	32†	+	53	+	10	59	..	..	38†
7 years										
8 years										
9 years										
10 years										
Disturbing dreams	+	33	+	47	..	..	..	..	..	..
Reserve	−	22†	+	59	+	11	52	..	..	47†
11 years										
Mood swings	+	41	+	40	..	..	..	..	..	..
Shyness**	−	15†	+	37	+	12	22	..	..	21†
Nailbiting	−	30†	+	40	+	13	33	..	..	26†

+ Peak.
† Indicates nonpeak percentages at same ages that other sex showed peak.
Italics indicates earlier peak for boys.
CAPITAL LETTERS indicate earlier peak for girls.
* Columns show later emergence of peaks.
** Not systematically sought before age 7.

such as *tempers, destructiveness,* and *stealing* had come into the picture for both sexes, as well as withdrawal patterns such as *fears* and *physical timidity. Food finickiness* occurred for both boys and girls although the girls did not reach their peak until age 6. Patterns of resistance first appeared, although girls reached their peak slightly later. *Irritability* (tension) reached peak frequencies as did *jealousy* and *excessive modesty* for girls, although the boys did not reach their peaks for these two behaviors until pubescence some seven years later.

By age 4, *poor appetite* and *emotional dependence* had reached peaks for boys, whereas peak frequencies in girls did not occur until two and three years later. Fifty per cent of the girls, however, hit upon *lying* as a coping device, whereas it took the boys two years longer to learn to take maximum advantage of this temporarily useful technique of evasion although more of them used it longer than did girls. *Overactivity* occurred in substantial fashion at age 4 but by the fifth birth date it had reached peak proportions for both boys and girls. *Somberness* emerged as a first peak at age 5 for boys, quickly subsided, and was again high at 11; the peak period for girls was 6 but also, as for boys, there was a secondary peak at age 11.

Age 6 saw a first peak for *oversensitiveness* in the girls but this most effective coping device did not reach its peak for boys until age 10 when even a higher proportion of boys were making effective use of it.

For years 7, 8, and 9, no peaks of new problems occurred, although *overdependence* in girls reached its height at 7, a pattern that boys had used maximally three years earlier. This 7, 8, and 9 period—a part of the latency period for psychoanalytic theory—represented a lull in new patterns and the lowest three-year period of tension of the entire age range as measured by our *irritability* frequencies.

At age 10, *disturbing dreams* reached their highest level for both sexes, and the peak for *reserve* occurred in girls, preceding by one year the boys' peak.

At age 11, *mood swings* reached maximum peaks for both sexes. Girls also reached peaks in *shyness* and *nailbiting,* preceding by one year and two years respectively the peaks in boys.

To summarize this section: The early pre-two-year patterns were involved with establishing controls for biological functions and such other low physical maturity level problems as *poor enunciation* and *thumbsucking.*

By 3, expressive and adaptive patterns emerge in the form of explosions of *temper* and in *destructiveness.* Withdrawal devices of protection and stalling for time appear in such behaviors as *fears, physical timidity*, and, in girls, *overmodesty*. Resistance or *negativism* as a coping device emerges in force for boys; overt *jealousy* looms up for girls. Then, slightly later, *evasion* becomes a trial-and-error tool, and the management-of-mother tool of *excessive dependence* emerges. Still later, by age 6, *oversensitiveness* becomes standard equipment for both sexes although the boys belatedly, but energetically, adopt it.

Then comes the very quiescent period of 6, 7, 8, and 9 when, for the most part, the youngsters as a group are less tense and no new tools arise.

At 10 and 11, internal problem-solving becomes intensified in *dreams, mood swings*, and such withdrawal patterns as *reserve* and *shyness*, which are coincident with more internalization (which our fantasy materials show).

Developmentally, from direct expression, and reaching through resistance and evasion to more internalization and inner controls, is the behavioral route traveled. Most of these behaviors which are labeled problems are essentially trial-and-error problem-solving attempts to meet new and/or ambiguous pressure, social and biological, external and internal. To understand these problem-solving behaviors, the nature of the situations which precipitate them, of course, needs to be known—an undertaking far beyond the scope of this report.

Sex differences in the age of appearance of peak frequency in order of the size of the age difference, will be summarized next.

The problems which showed earlier peaks in boys, in order of maximum age differences, were *excessive dependence* and *food finickiness*, three years earlier than in girls, and *poor appetite*, two years earlier. These last look like a combination of a less mature organism and more-nurturant-to-males mothers. *Somberness* in boys occurred one year earlier than in girls, but more girls showed *somberness* over a longer age period; both showed a rise in *somberness* at age 11. *Negativism* was reached slightly earlier in boys and continued in greater frequency through most of the age span. The only other earlier problems of boys involved one year or less difference. These were *speech retardation, thumbsucking*, and *physical timidity*, problems related largely to lesser maturity and, therefore, higher frequencies at the younger ages.

The problems which had highest frequencies in girls earlier than those in boys are as follows: *jealousy* and *excessive modesty* reached their highest frequencies in girls at age 3½, which is seven and one-half years earlier than in boys. *Oversensitiveness* in girls reached its peak at 6, four years earlier than it did in boys. *Lying* reached its first peak in girls at 4, two years earlier than in boys. And the overt behaviors of girls, *attention demanding, destructiveness,* and *stealing* reached their highs at 3 or less, two years earlier than boys, and were discarded by girls sooner. That *excessive modesty* appears earlier in girls probably is due to cultural pressures, although the fact that it reaches its peak at the same age as *jealousy* may indicate some anxiety as well. The overt acting-out patterns probably occurred in girls earlier and were given up earlier because, for age, they were more mature. The earlier appearance of *lying* and *oversensitiveness* again perhaps meant only that they were more mature or were forced earlier to more devious coping devices than were boys in whom direct action is longer tolerated. If the fathers had had more training time and contact with their children, we unquestionably would have variations in the kinds and the age of emergence of many patterns.

PROBLEMS PRESENT IN ONE-THIRD OF THE GROUP

Table 6 shows over time what problems appear with substantial frequency in a third or more of the boys and girls at the various age levels.

It can be seen that some problems were present early—at 21 months *diurnal* and *nocturnal enuresis* and *restlessness in sleep,* and *thumbsucking* in girls at 21 months and 3 years—but never reached the one-third-of-the-children level again. Other problems started later—*food finickiness, negativism,* and *lying*—and were given up by the children after a relatively brief trial run and did not recur at the one-in-three level. These were largely coping devices which apparently outran their usefulness for most children relatively quickly.

Some problems were much later in appearing at the one-out-of-three level—*reserve,* and still later, *nailbiting, mood swings, disturbing dreams,* and in the boys *jealousy*. Other patterns, once started, continued throughout most of the age span—*tempers* for boys (girls at age 7 gave them up except for one age level), and *oversensitiveness,* the most continuous for girls and second to *tempers* for boys who largely dropped this pattern at age 12. *Temper* appears as both a coping technique and an expressive reaction, and *oversensitiveness* as largely a coping device although in a few children it was associated with real tension. *Specific fears,* though not lasting as long as either *oversensitiveness* or *tempers,* occurred in nine out of fourteen age levels for both the boys and the girls. How much this is symptomatic of anxiety and how much it is a management tool is not clear, but when

TABLE 6

BEHAVIOR PROBLEMS SHOWN BY ONE-THIRD OR MORE OF THE BOYS AND GIRLS AT EACH AGE LEVEL

		Age 1¾	3	3½	4	5	6	7	8	9	10	11	12	13	14
ENURESIS (Diurnal & Nocturnal)	B	+													
	G	+													
SOILING	B														
	G														
DISTURBING DREAMS	B										+				
	G						+				+	+			
RESTLESS SLEEP	B	+													
	G														
INSUFFICIENT APPETITE	B														
	G						+								
FOOD FINICKINESS	B		+												
	G	+	+	+			+								
EXCESSIVE MODESTY	B														
	G														
NAILBITING	B													+	+
	G									+		+			
THUMBSUCKING	B														
	G	+	+												
OVERACTIVITY	B		+	+	+	+		+	+	+					
	G		+	+	+	+									
SPEECH	B														
	G														
LYING	B			+	+	+	+		+						
	G			+	+	+	+								
DESTRUCTIVENESS	B														
	G														
OVERDEPENDENCE	B														
	G														
ATTENTION DEMANDING	B														
	G														
OVERSENSITIVENESS	B			+	+	+		+	+	+	+	+	+		
	G			+	+	+	+	+	+	+	+	+	+	+	+
PHYSICAL TIMIDITY	B														
	G			+		+									
SPECIFIC FEARS	B		+	+	+	+	+	+	+	+		+			
	G	+	+	+	+	+	+	+	+			+			
MOOD SWINGS	B							--	--	--	+	+		+	
	G							--	--	--		+			
SHYNESS *	B	--	--	--	--	--	--	--							
	G	--	--	--	--	--	--	--				+			
SOMBERNESS	B					+									
	G						+								
NEGATIVISM	B			+		+									
	G				+										
IRRITABILITY	B														
	G														
TEMPERS	B	+	+	+	+	+	+	+	+	+	+	+	+	+	
	G	+	+	+	+	+	+	+				+			
JEALOUSY	B					+			+	+	+	+	+	+	
	G			+		+		+			+				
EXCESSIVE RESERVE *	B	--	--	--	--	+	+					+	+		
	G	--	--	--	--	+	+	+	+	+	+	+	+		+

* -- Data not obtained

one looks at *irritability* (tension) which never reaches the one-third level, it looks as if *specific fears* has coping elements. It may be related also to the low cut-off point on our code. And finally, some problems appeared in one-third of the children only at one age level, for example, *insufficient appetite* and *somberness;* and some never involved as many as a third of the children at any age between 21 months and 14 years inclusive. Among these were *speech difficulties, destructiveness, excessive dependence, attention demanding, excessive modesty,* and *irritability.*

SEX DIFFERENCES IN PROBLEM INCIDENCE

In table 3, incidence figures are presented for boys and girls separately; asterisks indicate ages at which sex differences are significant at the 1 or 5 per cent level of confidence. The problems showing statistically significant sex differences have been summarized in table 7. This listing points up the overt nature of the problems which boys had in greater number in contrast to the more withdrawing or internalized problems which girls had in greater number. Boys are more likely to have the following problems: *overactivity, attention demanding, jealousy, competitiveness, lying, selfishness in sharing, temper tantrums,* and *stealing.* The girls, on the other hand, are more likely than boys to *suck their thumbs,* be *excessively modest* and *reserved, fuss about their food,* be *timid, shy, fearful, oversensitive, somber,* and have *mood swings.* Do these sex-differing problems represent responses to cultural pressures? Or are these differences based on biological differences between boys and girls which are manifest even during the preschool years? Unquestionably both biological and cultural factors reinforce each other in producing sex differences in behavior, and since they act simultaneously they cannot be assigned adequate weight from a nonintensive study. It would appear that the sex differences in problem incidence are simply in the direction of basic biological differences and social stereotypes, but to an exaggerated degree.

A sex difference with possibly a different basis occurs at 21 months. More boys than girls at this age level have the problems: *diurnal enuresis, excessive emotional dependence,* and *irritability.* The first two of these problems are associated with less physiological maturity in the boy than in the girl of the same age, and the third, *irritability* (reactivity or tension), may be associated with greater motility and greater frustration when training is begun before maturational readiness.

TABLE 7

SEX DIFFERENCES IN THE INCIDENCE OF PROBLEM BEHAVIOR

Age in years	Problems having a statistically significant[a] greater incidence among:	
	Boys	Girls
1¾	Diurnal enuresis Excessive emotional dependence Irritability	
3		Excessive modesty Specific fears
4		Thumbsucking
5	Temper tantrums	Thumbsucking Physical timidity
6		Food fussiness Oversensitiveness Mood swings
7	Stealing	Excessive emotional dependence Shyness Excessive reserve
8	Hyperactivity Temper tantrums Lying	Excessive modesty Excessive reserve
9	Excessive demanding of attention	Shyness Somberness
10		Excessive reserve
11	Lying Excessive demanding of attention Jealousy Competitiveness	Shyness
12	Overactivity Lying	Disturbing dreams Physical timidity
13	Overactivity Selfishness in sharing	Specific fears

[a] At the 5 per cent level or better.

Although there are significant differences between boys and girls in the frequency of occurrence of specific problems, it is also true that problems having a high incidence at the preschool ages among boys also have a high incidence among girls. The method used was to compare the percentage incidence figures for boys (x-axis) with the percentage incidence figures for girls (y-axis) by means of correlation coefficients computed at the following ages:

Ages	*r*
1¾ years	.90
3 years	.88
3½ years	.84
4 years	.84
5 years	.84

TABLE 8

Average Number of Problems at Each Age Level

Age in years	Boys				Girls			
	N	Mean	S.D.	Range	N	Mean	S.D.	Range
1¾	56	6.1	3.4	1–16	60	5.2	3.0	0–13
3	49	5.6	3.3	0–17	49	6.1	3.0	1–14
3½	41	6.0	3.8	0–14	47	6.5	3.4	1–16
4	45	6.0	3.8	0–17	49	6.2	3.5	0–17
5	39	6.5	3.1	2–14	52	6.2	3.6	0–14
6	34	5.8	3.5	0–13	49	6.9	3.5	1–16
7	35	5.4	4.0	0–17	48	5.8	3.6	0–15
8	32	6.1	3.3	1–14	43	5.3	4.2	0–19
9	35	5.6	3.6	0–14	43	4.8	3.2	0–18
10	27	6.2	4.1	0–14	34	5.6	4.0	1–16
11	27	6.9	4.0	0–16	38	5.4	3.5	0–15
12	23	4.9	4.4	0–14	42	4.8	3.7	0–14
13	24	3.5	3.4	0–14	34	3.1	2.6	0–11
14	18	2.6	2.6	0–8	23	3.1	2.7	0–9

The fact that these correlations are almost as high as those obtained when the Guidance and Control Groups were compared is evidence of the reliability of the incidence figures, and indicates also that the similarity between boys and girls in problem incidence is greater than the differences.

The total number of problems of each child was computed, and the distributions of these problems are shown in figure 54. These distributions become *less* normally distributed as children give up infantile and young behavior at the later age levels. At 21 months every boy

DISTRIBUTION OF TOTAL NUMBER OF PROBLEMS
CONTROL GROUP

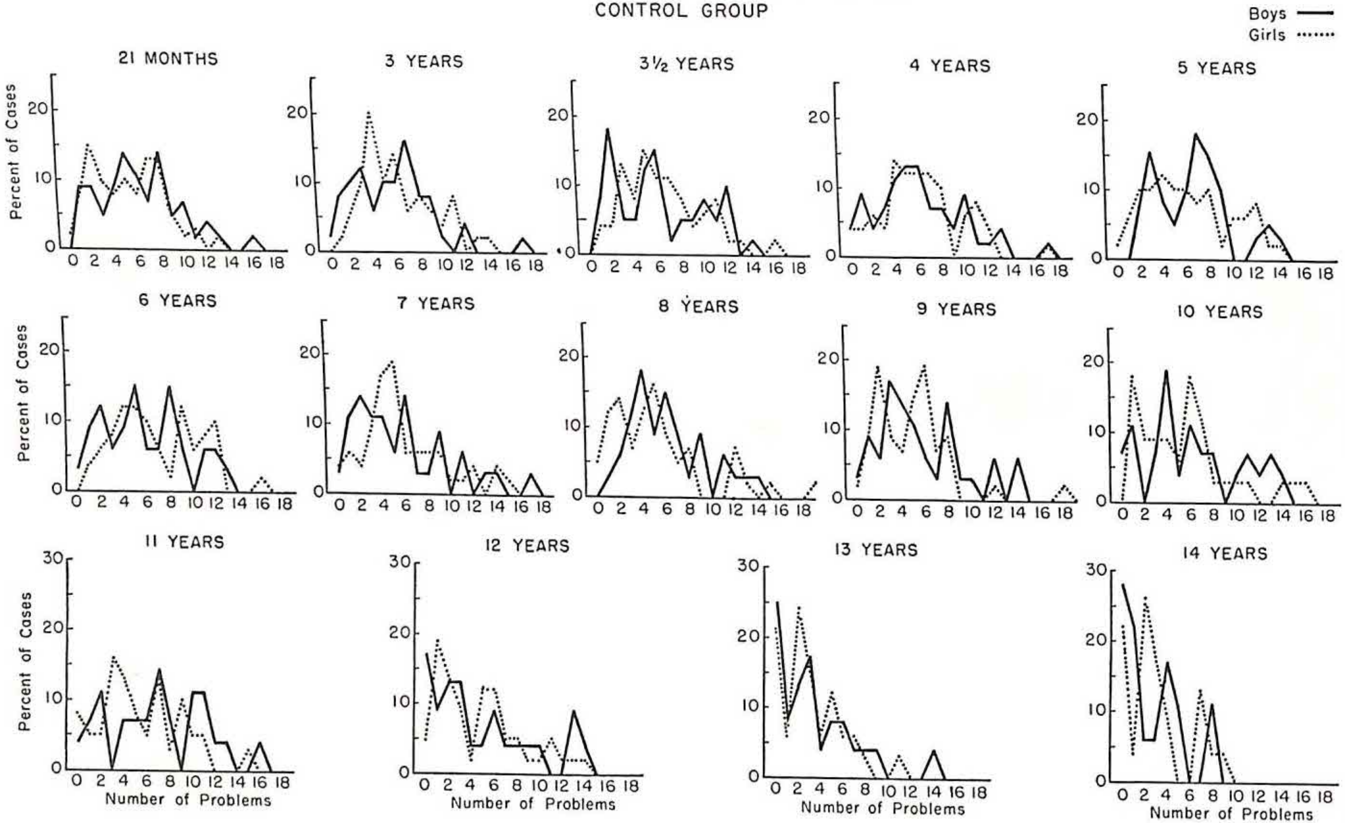

Fig. 54

was reported as having at least one problem, and only one girl was entirely problem free, according to her mother. By the age of fourteen, 28 per cent of the boys and 22 per cent of the girls were without problems. Inspection of these distributions reveals no clear-cut sex differences.

The means and standard deviations agree in showing no consistent trends. At 21 months, the boys' average is 6.1 problems and the girls', 5.2; but at 3 years, the mean for the boys is 5.6 and the girls' average is 6.1. These reversals reoccur up to 14 years when the girls' average is slightly above the boys'. The reason for these inconsistencies may lie in the heterogeneous nature of a problem total based on such varied behaviors as *excessive reserve* and *enuresis,* in other words, upon the distribution of the sampling of overt behaviors and the more internalized ones (table 8).

VIII. PERSISTENCE OF BEHAVIOR PROBLEMS AND PERSONALITY CHARACTERISTICS

One of the basic concerns in the theory of personality development is differentiating behavior which is durable and hence predictive from that which is transitory and nonpredictive. Certain questions which are relevant to this concern can be answered in part by the analysis of the data on the persistence through time of behavior and personality characteristics. These questions include: Are certain behavior problems more likely to persist than others? As specific behaviors drop out, do others appear so that a "total problem score" would be relatively consistent from one age level to another? To what extent do children later revert to problems reported at earlier age levels? These and other related questions are not easily answered since no simple statistic has been devised which will describe the pattern of persistence through time for individual children on specific behaviors. A complete record for an individual child on a certain problem includes fourteen age level entries which, if just presence or absence is considered, would include three types of scores: "+," "–," and "no record." The first difficulty is finding a way of adjusting the "no record" scores. And the second difficulty is finding a means of describing the record with as few as two types of scores—presence or absence of the designated behavior—since the pattern of +'s and –'s might differ markedly even for those cases where the proportion of +'s were the same. For example, one child might have a + on *disturbing dreams* at all age levels between 21 months and 7 years; another child might have this problem at three age levels during the preschool period and then not again until he was in Junior High. In both of these cases, the percentage of positive occurrences of the problem would be the same.

To date we have made only a preliminary analysis of the data of this study from the point of view of persistence. We have computed (1) interage correlations between total-number-of-problems for boys and girls separately; (2) interage correlations for the severity of specific behavior problems where the distributions justified this procedure; and (3) the proportion of children who had each problem at (a) all age levels, (b) no age levels and (c) at varying proportions of the fourteen age levels. This last procedure is the one which is affected by the criticisms mentioned in the previous paragraph.

TABLE 9

Sex Differences in the Persistence of Problem Behavior

Correlations between Total Number of Problems Obtained at Various Ages for Boys and Girls

Age in years	Sex	N	3	3½	4	5	6	7	8	9	10	11	12	13	14
1¾	Boys	56	.38	.30	.38	.40	.33	.20	.27	.00	.31	.13	.03	.07	−.01
	Girls	59	−.01	.31	.32	.26	.32	.21	.42	.24	.42	.13	−.03	−.12	−.19
3	Boys	49	...	.35	.50	.31	.31	.26	.40	.35	.45	.40	.32	.36	.47
	Girls	48	...	.33	.58	.50	.35	.19	.20	.29	.26	.13	.19	.15	.23
3½	Boys	41	...	...	.48	.34	.46	.24	.46	.40	.14	.16	.24	.14	.27
	Girls	47	...	...	.73	.67	.49	.49	.39	.49	.38	.38	.30	.04	−.08
4	Boys	45	...	...	...	.56	.62	.57	.79	.32	.54	.45	.60	.64	.60
	Girls	48	...	...	...	.67	.52	.50	.47	.44	.32	.35	.24	.00	.16
5	Boys	40	...	...	...	...	.59	.49	.59	.35	.48	.08	.25	.20	−.07
	Girls	52	...	...	...	...	.51	.60	.51	.44	.62	.51	.57	.47	.34
6	Boys	34	...	...	...	...	...	.67	.68	.70	.82	.73	.81	.69	.73
	Girls	49	...	...	...	...	...	.80	.55	.40	.32	.51	.37	.39	.59
7	Boys	35	...	...	...	...	...	...	.73	.50	.55	.46	.52	.51	.61
	Girls	46	...	...	...	...	...	...	.75	.55	.65	.72	.68	.43	.56
8	Boys	32	...	...	...	...	...	...	...	.64	.68	.55	.70	.53	.36
	Girls	43	...	...	...	...	...	...	...	.78	.67	.64	.67	.39	.58
9	Boys	35	...	...	...	...	...	...	...	...	.70	.59	.75	.56	.55
	Girls	41	...	...	...	...	...	...	...	...	.70	.47	.74	.54	.61
10	Boys	27	...	...	...	...	...	...	...	...	...	.76	.78	.62	.48
	Girls	34	...	...	...	...	...	...	...	...	...	.67	.74	.43	.53
11	Boys	27	...	...	...	...	...	...	...	...	...	...	.86	.75	.80
	Girls	38	...	...	...	...	...	...	...	...	...	...	.67	.47	.57
12	Boys	23	...	...	...	...	...	...	...	...	...	...	...	.92	.88
	Girls	42	...	...	...	...	...	...	...	...	...	...	...	.62	.82
13	Boys	24	...	...	...	...	...	...	...	...	...	...	...	...	.86
	Girls	34	...	...	...	...	...	...	...	...	...	...	...	...	.60
14	Boys	18	...	...	...	...	...	...	...	...	...	...	...	...	...
	Girls	23	...	...	...	...	...	...	...	...	...	...	...	...	...

Average r for boys = .52.
Average r for girls = .45.

INTERAGE CORRELATIONS OF THE TOTAL NUMBER OF PROBLEMS

Correlations have been computed between the total number of problems obtained at one age with the total number obtained at all other ages. These coefficients are presented in table 9. Since there are some sex differences in problem incidence, the composition of the problems in the total score would differ somewhat for boys and girls but not markedly so since a high correlation between the problem incidence figures for boys and girls at each age level was obtained (chap. 7).

Interage correlations of physical and of mental measures follow a definite pattern of increasing relationship with age but a decreasing relationship with the time interval between measurements (3, 10). The interage correlations for total number of problems follow the first of these patterns to some extent but not the second. The most impressive fact to be observed in the table of intercorrelations is the presence of seeming inconsistencies in the relation of problem scores over varying periods of time. For example, correlations between total number of problems at 21 months and 3 years is –.01 for girls, but the correlation between the girls' scores at 21 months and 8 years is .42. This finding suggests that girls who have a large number of problems at 21 months are not likely to have an above-average number at 3 years but are likely to have a large number again at 8 and 10 years. These seeming inconsistencies are not restricted to girls. The correlation between the total number of problems of boys at 3 years with the problem score at 3½ is .35; but at 4 years it is .50; and at 14 years is .47. How do we account for these findings? The fact that the correlations are for the most part positive and in many instances relatively high suggests that boys or girls who have high problem scores at one age are likely to have high problem scores at later ages, and it may be at a much later age. However, if each child had his own individual ups and downs in problem frequency, there would not be the sizable shifts in the correlations which are noticeable. In other words, the fact that the boys' problem score at 14 years of age correlates .60 with the boys' score at 4 years, but –.07 with the boys' score at 5 years and .73 with the boys' score at 6 years suggests that something is happening in the general experience of boys at 5 years. School entrance and/or health conditions may have had a temporary effect on the boys' behavior, as judged by the mothers, such that there was change in behavior as reported at 5 years as compared with 4 years, and then a reversal at 6 years to behavior which was more like the 4-year score than the closer-in-time 5-year score. Confirmation of this hypothesis is to be seen in the fact that the boys' problem scores at 4 years are more highly correlated with the problem scores at 6 years (.62) and 8 years (.79) than with the problem scores at the adjacent age level 5 years (.56). We are impressed to find that the problem scores are sufficiently sensitive to pick up temporary changes in behavior which may be related to school entrance and/or illness experience.

We are including at the end of this chapter a short case history of a boy whose problems reached their numerical peak at 5 years when he entered kindergarten (fig. 55, Case 695).

The girls' problem scores do not reflect school entrance to the same degree as do the boys' (table 9). Why should this be true? The answer to this question may lie in the girls' relatively greater maturity and therefore readiness for school, and in the differences in the kinds of problems appearing in boys and girls. The expressive, overt problems of boys are possibly more affected by school discipline than the less active and more conforming patterns of girls.

Another conclusion which can be drawn from table 9 is that on the whole, the boys' problem scores are somewhat more persistent and predictive than the girls'. The average intercorrelation for the boys is .52 and for the girls is .45. There are a number of possible reasons for this sex difference in consistency of the problem scores: (1) The types of problems shown by boys are more overt and may be more likely to be noticed and/or to persist than those seen in greater numbers in girls; (2) a larger proportion of the girls are adolescent by 14 years than is true for the boys. Thus, the girls have experienced physiological changes of greater magnitude than would be true for the boys. The average age of menarche for these girls was 12.8 years (8); or (3) the girls may have changed and adapted more than the boys, being perhaps more susceptible to cultural pressures.

The interage correlations for the severity of specific behaviors may clarify some of the questions that have arisen.

INTERAGE CORRELATIONS OF THE SEVERITY OF SPECIFIC BEHAVIOR PROBLEMS

The behavior problems were not systematically coded on five-point scales until 5 years, and not until 7 years for a few of the behavior items. The interage correlations of these codings for specific behavior problems, beginning at 5 and 7 years, are shown in table 10.

Although we refer to the persistence of each behavior *problem*, the behavior coding in every instance covers a continuum ranging from "presence-of-in-an-extreme-form" to "absence of." In some instances there are only a few or, occasionally, no children in the coding range categorized as "problem" at one or both of the ages compared.

These correlations for the most part were not computed for boys and girls separately. This will be done at a later date when a comprehensive study of problem persistence is made. However, the correlations reported in table 10 are of interest in showing even more clearly than the total number of problem scores that behavior which was present at one age may reoccur at some much later period. The ages at which inconsistencies occur in the correlations show that the persistence of problems differs from problem to problem.

Restlessness in sleep.—This behavior is not one which is likely to persist although there is a trend in the direction of increasing persistence with age. For the year period 7 to 8, the correlation is .29, and for the year period 12 to 13, it is .51, but the correlations between the 13- and 14-year codings is .39. Children who have shown this behavior at one age show some tendency to revert to it at later ages. For example, the correlation between 7 and 10 years is .09 (.10 for boys and .08 for girls), but between 7 and 12 years it is .32 (.34 for boys and .35 for girls). Also the correlation between 9 and 12 years is .14 but between 9 and 14 years, it is .32.

Insufficient appetite.—This problem shows relatively a higher correlation for adjacent age levels than many other problems, but the correlations approximate zero after long intervals of time, which we would expect since it is correlated with *illness*. The only inconsistent correlation occurs between 8 and 11 years, .26, which is much lower than the correlation between 8 and 13 years (.69).

Food finickiness.—Correlations between codings at adjacent ages range from .44 (10 by 11 years) to .79 (13 by 14 years). Only one inconsistency occurs and that one is of questionable significance. The correlation between 8 and 11 years is .25, but between 8 and 13 years, it is .39. The correlations for both boys and girls were higher for 8 to 13 years than for 8 to 11 years. Even for the seven-year period, 7 to 14 years, the correlation is .24. However, the presence of *food finickiness* at 21 months is not correlated with the occurrence of this problem at 3, 4, or 5 years (tetrachoric *r*'s range from .01 to .19).

Excessive modesty.—This behavior is not one which is maintained even from one year to the next. The correlations between codings at 6 and 7 years and 7 and 8 years are actually negative. However, one

TABLE 10
INTERAGE CORRELATIONS SHOWING PERSISTENCE OF PROBLEM BEHAVIOR

Behavior problems	5 × 6	5 × 8	5 × 10	5 × 12	5 × 14	6 × 7	6 × 9	6 × 11	6 × 13	7 × 8	7 × 10	7 × 12	7 × 14
Sleeping habits													
Restlessness in sleep	..	..	..	..	..	..	..	..	..	.29	.09	.32	.08
Eating habits													
Insufficient appetite	.45	.48	.29	.36	.04	.51	.53	.13	.17	.71	.40	.38	−.07
Food finickiness	..	..	..	..	..	..	..	..	..	.70	.32	.31	.24
Sex habits													
Excessive modesty	.11	−.01	−.07	.27	.18	−.05	.19	.04	−.10	−.04	.14	.23	.35
Motor habits													
Overactivity	.62	.26	.42	.10	−.13	.41	.37	.29	.07	.48	.55	.25	.03
Destructiveness	.53	.39	.07	.07	.12	.49	.39	−.01	.33	.58	.33	.45	.42
Social standards													
Selfishness	..	..	..	..	..	..	..	..	..	.41	.27	.32	.06
Quarrelsomeness	..	..	..	..	..	..	..	..	..	.42	.27	.28	.05
Personality characteristics													
Emotional dependence	.35	.34	.38	.41	.35	.44	.33	.42	.25	.56	.40	.22	.34
Attention demanding	.12	.26	.08	.04	.01	.19	.10	.22	.28	.60	.21	.28	.45
Oversensitiveness	.37	.31	.34	.30	.32	.45	.33	.25	.22	.58	.41	.29	.19
Physical timidity	.26	.25	.08	.05	.06	.33	.33	.43	.09	.43	−.01	−.05	.17
Shyness	..	..	..	..	..	..	..	..	..	.51	.52	.22	.60
Somberness	.25	.49	.22	.30	.20	.39	.47	.44	.31	.61	.43	.53	.55
Irritability	.43	.36	.36	.38	.30	.46	.31	.63	.29	.39	.38	.31	.37
Temper tantrums	.36	.30	.42	.38	.22	.19	.34	.27	.26	.66	.34	.36	.15
Jealousy	..	..	..	..	..	..	..	..	..	.50	.47	.55	.49
Excessive reserve	..	..	..	..	..	..	..	..	..	.51	.36	.44	.42
Number of cases	77	70	54	61	38	71	65	55	52	67	51	56	35

TABLE 10—*Continued*

Behavior problems	8 × 9	8 × 11	8 × 13	9 × 10	9 × 12	9 × 14	10 × 11	10 × 13	11 × 12	11 × 14	12 × 13	13 × 14
Sleeping habits												
Restlessness in sleep	.29	.32	.12	.34	.14	.32	.13	.10	.40	.24	.51	.39
Eating habits												
Insufficient appetite	.66	.26	.69	.34	.46	.07	.27	.29	.54	.06	.54	.50
Food finickiness	.54	.25	.39	.47	.36	.35	.44	.28	.63	.30	.51	.79
Sex habits												
Excessive modesty	.29	.38	.13	.38	.50	.32	.47	.22	.57	.33	.34	.47
Motor habits												
Overactivity	.55	.44	.27	.56	.14	.18	.52	.34	.29	.26	.44	.58
Destructiveness	.68	.41	.39	.54	.42	.39	.26	.35	.25	.27	.64	.50
Social standards												
Selfishness	.68	.43	.44	.39	.17	.19	.50	.52	.59	.48	.70	.44
Quarrelsomeness	.61	.37	.37	.58	.36	.36	.75	.31	.67	.31	.71	.46
Personality characteristics												
Emotional dependence	.39	.34	−.03	.61	.29	.51	.57	.39	.61	.66	.73	.86
Attention demanding	.59	.50	.36	.40	.51	.52	.46	.33	.75	.65	.54	.67
Oversensitiveness	.65	.55	.31	.46	.66	.33	.55	.37	.60	.40	.67	.59
Physical timidity	.60	.31	−.11	.60	.28	.28	.52	.20	.59	.50	.61	.59
Shyness	.45	.39	.34	.52	.38	.54	.63	.50	.54	.73	.71	.74
Somberness	.66	.42	.36	.54	.43	.52	.65	.46	.49	.54	.49	.56
Irritability	.66	.35	.40	.55	.29	.57	.60	.38	.56	.32	.46	.61
Temper tantrums	.54	.42	.58	.44	.42	.44	.61	.53	.49	.65	.57	.62
Jealousy	.44	.47	.43	.63	.44	.46	.52	.45	.67	.33	.51	.60
Excessive reserve	.64	.40	.45	.41	.48	.60	.38	.54	.53	.55	.73	.76
Number of cases	65	58	54	55	56	37	49	45	54	33	51	36

very interesting inconsistency occurs. Codings of the *excessive modesty–exhibitionism* continuum at 7 and 14 years correlate to the extent of .35, whereas the correlation between codings at 7 and 8 ($r = -.04$) and 7 and 10 years (.14) are negligible. This correlation of .35 (which is statistically significant at the 5 per cent level) between codings given seven years apart was of such interest that we computed the correlation for boys and girls separately and found that the correlation was the same for both sexes. The only hypothesis we can offer for this finding is that these modesty ratings reflect the latency period. The children with the highest ratings at 7 years received similar ratings at 14, but in the intervening years (latency period), these children were variably modest. Had our codings been available for the preschool years we would have had more critical comments available about the relationship between early body concern and adolescent concern. When we make a similar analysis on our intensive group we may be better able to throw light on this.

Overactivity.—This is not a behavior that persists for any length of time. Correlations between adjacent age levels range from .29 (11 by 12 years) to .62 (5 by 6 years). Only one inconsistent correlation occurs and that is the higher correlation of .42 for the five-year period (5 by 10 years) in contrast to the correlation of .26 for the three-year period (5 by 8 years). This inconsistency is due largely to the boys since the correlation between 5 by 8 years for boys is .31 and .24 for girls, and between 5 by 10 years it is .56 for boys and .21 for girls.

Destructiveness.—Codings of the severity of this problem are fairly consistent for certain age periods but not for others (range from .25 to .64); and the correlations become negligible after periods of 5 or 6 years. One outstanding inconsistency occurs. The correlation between codings at 6 and 11 years is –.01, whereas the correlation between the severity of codings at 6 and 13 years is .33. Confirmation of this fact that the 11-year codings are not highly correlated with codings earned before and after this year is to be seen in the fact that the correlation between 10 and 11 years is .26, and between 11 and 12 years is .25. Children living in the community in which this study was made are for the most part in the last grade of elementary school, the sixth, at 11 years; and it may well be that the responsibilities of that year help children with destructive impulses to change their behaviors for a period of time. Another explanation may lie in the fact that the eleventh year is the year when many children show a spurt in growth and the concomitant changes of early adolescence. Other problems showing inconsistencies in the correlations obtained with the eleven-year codings are the food problems discussed above.

Selfishness and quarrelsomeness.—The persistence correlations for these two behaviors are very similar and are not unusual in any way. Adjacent ages correlate fairly well. The highest correlation occurs between the 12- and 13-year scores for *selfishness* (.70) and between 10 and 11 for *quarrelsomeness* (.75).

Personality characteristics.—For the most part, codings of the personality characteristics at 5 and 6 years are not highly correlated with codings at subsequent ages. The only exception is *irritability* at 6 years, which correlates with the codings of this problem at 11 years, .63 (r for boys is .74 and for girls is .55).

The series of personality characteristics tend to show increasing persistence with age. Correlations for the one-year period (13 to 14 years) for the eleven problems range from .56 (*somberness*) to .86 (*emotional dependence*), in contrast to the correlations for the one-year period 5 to 6 years, which vary from .12 (*attention demanding*) to .43 (*irritability*). Two of these behaviors show a greater persistence for the seven-year period, 7 to 14 years, than for the five-year period, 7 to 12 years: *shyness* (7 by 12 years, $r = .22$; 7 by 14 years, $r = .60$); *attention demanding* (7 by 12 years, $r = .28$; 7 by 14 years, $r = .45$). *Emotional dependence* is another problem that shows this trend to a slight degree. Similarly, for four of the problems, the 9-year codings are more highly correlated with the 14-year than with the 12-year codings (*emotional dependence, shyness, somberness, irritability* and *excessive reserve*). Specifically, the persistence correlations for the problem *emotional dependence* are as follows:

9 by 10 years, $r = .61$
9 by 12 years, $r = .29$
9 by 14 years, $r = .51$

This finding that the 12-year codings for these problems are somewhat atypical or out of line with behaviors or characteristics noted before and after this age level leads us to consider what might be occurring in the lives of these children at 12 years that would be of sufficient generality to affect the correlations. The majority of children leave one of the fourteen elementary schools and enter one of the three junior high schools in the city at age 12 years; this radical change may be causing some of the behavioral shifts which we have observed in the correlations. Age 12 is also a year in which the physiological changes of beginning adolescence are proceeding apace. Support for this latter hypothesis is to be found in the difference in the correlations obtained for boys and girls. The girls are the ones who are showing this inconsistency:

9 by 10 years, r for girls is .59; for boys, .63
9 by 12 years, r for girls is .12; for boys, .53
9 by 14 years, r for girls is .46; for boys, .53

On the other hand, when the 7-year codings on *emotional dependence* are compared with those at 10, 12, and 14 years, the 14-year codings are predicted better than the 12-year codings for both boys and girls (7 by 12 years, .30 for girls and .06 for boys, in contrast to 7 by 14 years, .45 for girls and .25 for boys). Similar findings were obtained for *shyness*, that is, the 7-year codings predicted 14-year ones better than 12-year ones for both boys and girls. However, table 10 shows that all the persistence correlations do not reflect atypical characteristics at 12 years. The problems which *do* show this 12-year inconsistency are: *shyness, somberness, temper tantrums,* and *excessive reserve,* in addition to *emotional dependence.* For these five problems, the correlations showing problem persistence for the one-year period, 11 to 12 years, are lower than the correlations for the three-year period, 11 to 14 years. The relatively low correlations for the 12-year codings suggest a change in behavior which, in turn, indicates that children are exhibiting this problem in more or less severe form and then a year later reverting to behavior which had been more typical. The most marked instance of this occurs for *excessive reserve.* The correlations for girls between codings at 9 and 10 years is .40, 9 and 12 is .45, and 9 and 14 is .89.

Attention demanding behavior at 5 and 6 years does not persist for many children. These correlations are based on codings of the mother's report and the mother's attention is, of course, less demanded when the children go to kindergarten and first grade at 5 and 6 years. From 7 years on, attention demanding shows a fair degree of persistence, correlations ranging from .40 to .75 for adjacent year levels.

DISTRIBUTIONS OF NUMBER OF AGE LEVELS AT WHICH SPECIFIC PROBLEMS ARE PRESENT

Another method of evaluating persistence is simply to consider the number of age levels at which a problem is present in relation to the total number of age levels for which data were collected. Our first question might be: "Are any children given problem ratings on specific behavior problems at *all* age levels?" The answer is: "Very few." Of the 33 boys and 43 girls for whom we have reports at eight or more age levels, we found that three boys and one girl were reported as having *tempers,* and one boy and one girl were reported as being *jealous* at all age levels; another boy and girl were reported as *overactive* at all ages; one boy had an *insufficient appetite,* and another *food finickiness,* and another *specific fears,* at every age level. At the other end of the scale, there was a fairly sizable number of children for whom specific problems were never reported as being present at any age level.

Problems which were present for more than half the age levels at which reports were obtained for a sizable number of children included for boys, *tempers* (55 per cent) and *oversensitiveness* (42 per cent); for girls, *oversensitiveness* (47 per cent); and *excessive reserve* (40 per cent) (table 11).

Problems that occurred in 90 per cent of the boys at one or more age levels between 21 months and 14 years were: *specific fears, jealousy,* and, of course, *temper tantrums.* Problems present in 90 per cent of the girls at one or more ages include *food finickiness, physical timidity, specific fears,* and *temper tantrums.* Since at no age did 90 per cent of the group show any one of these problems, it is clear that the *same* children are not always contributing to these percentages. In other words, these problems tend to be transitory, lasting for a period of time and then disappearing, perhaps to reappear a few years later. Even in children living in highly disturbing environments where there is relatively high problem incidence, such as, for example, Case 320, page 178, the problems tend to be transitory. This case also illustrates the fact, which was not brought out by the present analysis of problem persistence, that there is one problem that is highly persistent for a short age span, and that is *thumbsucking.* Too few children had this problem after 5 years to justify computing persistence correlations by use of the codings, but inspection of the records for individual children show that this is a highly persistent, or at least recurrent, problem for the early preschool years.

At the end of this chapter is a "Summary of the Problem Incidence" of a girl who had many of the problems we have discussed (see fig. 56, Case 320). Inspection of her record will show the extent to which problems appear and disappear and, in spite of the fact that this child's home life was sufficiently disturbing to keep her in problems at all ages, there are changes in her problems at the problem-change period of kindergarten entrance and at the transition from elementary to junior high school at 12 years.

TABLE 11
Proportion of Visits at Which Each Problem Was Reported
(21 months through 14 years)

Behavior problems[a]	Sex	Proportion of visits each problem was reported							
		None		One or more		50 per cent or more		Every visit	
		N	Per cent	N	Per cent	N	Per cent	N	Per cent
Sleeping habits									
Disturbing dreams	Boys	5	15	28	85	4	12	0	0
	Girls	5	12	38	88	7	16	0	0
Restlessness in sleep	Boys	11	33	22	67	1	3	0	0
	Girls	17	40	26	60	0	0	0	0
Elimination habits									
Diurnal enuresis	Boys	15	45	18	55	0	0	0	0
	Girls	24	56	19	44	0	0	0	0
Nocturnal enuresis	Boys	10	30	23	70	5	15	..	0
	Girls	9	21	34	79	5	12	..	0
Eating habits									
Insufficient appetite	Boys	13	39	20	61	1	3	1	3
	Girls	17	40	26	60	5	12	..	0
Food finickiness	Boys	11	33	22	67	6	18	1	3
	Girls	4	9	39	91	4	9	..	0
Sex habits									
Excessive modesty	Boys	10	30	23	70	2	6	..	0
	Girls	14	33	29	67	3	7	..	0
Motor habits									
Tics and mannerisms	Boys	25	76	8	24	0	0	..	0
	Girls	32	74	11	26	0	0	..	0
Nailbiting	Boys	17	52	16	48	5	15	..	0
	Girls	17	40	26	60	9	21	..	0
Thumbsucking	Boys	25	76	8	24	1	3	..	0
	Girls	24	56	19	44	6	14	..	0
Overactivity	Boys	6	18	27	82	9	27	1	3
	Girls	16	37	27	63	3	7	1	2
Speech problems	Boys	17	52	16	48	2	6	..	0
	Girls	28	65	15	35	3	7	..	0

[a] For 33 boys and 43 girls for whom we have behavior records at eight or more age levels.

TABLE 11—*Continued*

Behavior problems[a]	Sex	Proportion of visits each problem was reported							
		None		One or more		50 per cent or more		Every visit	
		N	Per cent	N	Per cent	N	Per cent	N	Per cent
Asocial conduct									
Lying	Boys	4	12	29	88	6	18	..	0
	Girls	10	23	33	77	2	5	..	0
Truancy from home	Boys	26	79	7	21	0	0	..	0
	Girls	38	88	5	12	0	0	..	0
Stealing	Boys	20	61	13	39	0	0	..	0
	Girls	30	70	13	30	0	0	..	0
Destructiveness	Boys	12	36	21	64	2	6	..	0
	Girls	28	65	15	35	1	2	..	0
Personality characteristics									
Excessive emotional dependence	Boys	10	30	23	70	2	6	..	0
	Girls	17	40	26	60	3	7	..	0
Excessive attention demanding	Boys	10	30	23	70	0	0	..	0
	Girls	19	44	24	56	3	7	..	0
Oversensitiveness	Boys	5	15	28	85	14	42	..	0
	Girls	7	16	36	84	20	47	..	0
Physical timidity	Boys	8	24	25	76	3	9	..	0
	Girls	4	9	39	91	3	7	..	0
Specific fears	Boys	3	9	30	91	11	33	1	3
	Girls	3	7	40	93	14	33	..	0
Mood swings	Boys	9	27	24	73	5	15	..	0
	Girls	12	28	31	72	4	9	..	0
Somberness	Boys	11	33	22	67	2	6	..	0
	Girls	13	30	30	70	3	7	..	0
Negativism	Boys	7	21	26	79	4	12	..	0
	Girls	15	35	28	65	1	2	..	0
Irritability	Boys	16	48	17	52	2	6	..	0
	Girls	25	58	18	42	3	7	..	0
Temper tantrums	Boys	..	0	33	100	18	55	3	9
	Girls	1	2	42	98	12	28	1	2
Jealousy	Boys	3	9	30	91	10	30	1	3
	Girls	9	21	34	79	10	23	1	2
Excessive reserve	Boys	8	24	25	76	8	24	..	0
	Girls	5	12	38	88	17	40	..	0

[a] For 33 boys and 43 girls for whom we have behavior records at eight or more age levels.

Summary.—The correlations presented in this chapter have been discussed in terms of the tendency for problem behaviors to persist. Actually, the correlations might also be thought of in terms of the magnitude of the *changes* that occur. The fact that there are no coefficients above .86 suggests that no problem inevitably persists even for periods of one year. Our findings show that, although there is a tendency for problems to be present for varying lengths of time, change rather than persistence is of the greater significance. Not only are changes occurring all the time in these behaviors but there are certain epochs in the child's life when the problem patterns tend to be disrupted. A year after the "epoch," the old pattern may be resumed but not with the same intensity that was prevalent before. These pivotal points or epochs seem to coincide with the ages at which children are called upon to make major adjustments in their school life, the year of kindergarten entrance, the last year of elementary school, and the year of entrance to a junior high school. The 11- and 12-year epochs are probably related also to the marked physical changes of adolescence.

The following summaries of happenings in the lives of two children are not presented as case histories, which our non-beneath-the-surface inventorying precludes, but simply as summaries of the sequences of events as noted by the interviewer, including the comments made by the mother and teachers about these two children. The boy showed a marked increase in problems at the time of entering kindergarten. The girl, who came from an atypical and disturbed home, had more than her share of problems at all ages with marked shifts in problems in the 11- to 13-year period. For these two cases we will present our method of summarizing the problems of individual children against the background of group incidence figures. In these summaries, the dotted areas which do not enclose incidence figures denote age levels at which data were not collected for the specific problem.

Case 695. Boy with Highest Number of Problems at 5 years

This boy has an older brother and a younger sister. His parents are college graduates. The father has always felt inferior to his own father in earning capacity. The boy has had good health, good mental ability as measured by our tests, and an early maturing body. These three factors are considered favorable for male adjustment. His problems, as reported by the mother, reached their peak at 5 years. He had just entered kindergarten and was tense, overactive, and was both wetting and soiling his pants, and was stuttering when excited. He was stealing things from other children. He was a show-off and "the truth was taken lightly." His teacher reported him as original in his stories and as having musical talent.

SUMMARY OF PROBLEM INCIDENCE - CONTROL GROUP BOYS

Shaded areas indicate ages at which Case 695 had a problem

Data from Parents ▨

Case Number 695

# \ Age	0–1	1–2	2–3	3–4		4–5	5–6	6–7	7–8	8–9	9–10	10–11	11–12	12–13	13–14	14–15	PROBLEM TITLE
1		16*	29	22	24	▨ 20	▨ 24	26	▨ 22	29	33	26	9	4	6		Disturbing Dreams
2		38	18	5	2	8	12	11	9	14	22	▨ 22	13	0	11		Restless Sleep
3		62	6	2	0	▨ 3	▨ 0	0	0	0	0	0	0	0	0		Diurnal Enuresis
4		▨ 75	18	17	13	8	9	17	12	11	11	15	9	8	11		Nocturnal Enuresis
7		7	2	17	31	23	▨ 29	23	16	6	▨ 7	7	9	8	0		Poor Appetite
9		30	37	32	31	▨ 28	29	17	12	6	4	▨ 11	17	4	6		Food Finickiness
11		0	8	7	16	20	12	6	22	17	15	30	17	8	22		Modesty
12		0	0	0	0	0	0	0	0	0	0	0	0	0	0		Exhibitionism
13		9	8	7	▨ 16	8	6	3	6	3	4	4	4	4	0		Masturbation
14								0	0	0	0	4	0	0	0		Sex Interest
15		0	0	5	4	5	3	11	3	3	0	4	0	0	0		Tics, Mannerisms
18		5	8	7	9	8	12	23	16	20	18	30	22	▨ 33	33		Nailbiting
19		21	18	12	7	5	6	3	3	0	0	4	0	0	0		Thumbsucking
20		29	37	▨ 37	44	▨ 46	▨ 32	▨ 40	▨ 38	▨ 34	▨ 28	▨ 30	▨ 26	▨ 17	11		Overactivity
21		30	24	17	16	▨ 18	▨ 12	6	6	6	▨ 11	7	9	8	0		Speech Problems
22		0	▨ 14	▨ 37	▨ 33	▨ 49	▨ 53	26	41	31	15	11	9	8	6		Lying
22a		0	2	7	9	10	6	0	0	0	0	0	0	0	0		Truancy-Home
22b								0	0	0	0	0	0	0	0		Truancy-School
23		7	12	10	11	▨ 10	▨ 6	9	▨ 9	▨ 6	4	0	0	0	0		Stealing
24		14	20	10	20	28	24	▨ 17	22	11	11	7	4	0	0		Destructiveness
26								6	▨ 22	17	18	18	9	12	0		Nonsharing
27								9	6	9	7	7	4	4	0		Quarrelsomeness
28		▨ 21	14	24	27	13	18	3	3	11	15	11	13	4	11		Emot. Dependence
29		20	20	24	27	10	9	▨ 11	▨ 22	23	▨ 26	▨ 18	13	8	0		Atten. Demanding
35		9	▨ 29	34	42	▨ 46	32	37	50	51	▨ 59	59	39	21	17		Oversensitiveness
36		23	▨ 31	24	16	▨ 15	18	26	16	23	▨ 30	26	4	0	0		Physical Timidity
36b								9	16	3	18	15	22	8	0		Shyness
37		▨ 30	▨ 43	▨ 56	47	▨ 46	38	37	▨ 34	▨ 40	22	▨ 52	▨ 17	4	6		Specific Fears
38		9	18	24	24	8	6				▨ 37	▨ 41	22	33	22		Mood Swings
38a		0	0	5	16	36	26	11	16	9	18	30	26	12	6		Somberness
40		18	▨ 29	42	20	▨ 33	26	11	19	11	22	22	9	17	11		Negativism
41		16	10	24	18	10	9	6	9	14	15	18	13	12	11		Irritability
42		59	▨ 69	▨ 66	53	59	▨ 59	▨ 57	53	▨ 51	44	44	39	33	22		Temper Tantrums
43		▨ 30	▨ 29	▨ 27	▨ 29	▨ 36	24	29	44	34	41	48	44	33	22		Jealousy
44								11	19	▨ 9	▨ 11	11	4	0	0		Competitiveness
46								23	25	26	22	4	17	12	11		Unself-reliant
45						41	41	20	19	26	22	52	39	25	17		Reserve
		44	54	47	42	70	56	46	50	48	54	48	43	46	40		Total Problem Z-Score

*Group percent incidence shown in cells

Fig. 55

The persistent problems were:

Overactivity.—This was basic. At 8 years, he was spending an hour after school on his bed to reduce tension. At 10 years, he and a neighbor boy were getting out a neighborhood paper. At 11 years, he was writing a book, and his teacher stated that he had a flair for words but was "superficial" and a pronounced show-off. At 12 years, he joined the Scouts. At 13, nailbiting began and was still occurring at 18. The summer following his fourteenth birthday, he was doing heavy manual labor. He was one of the large boys in his last year of Junior High and still seeking the limelight.

Specific fears.—At 21 months, he was afraid of the doorbell ringing, then dogs, then the dark, ghosts, any unknown. At 15, he stated he wasn't interested in joining a social club in high school—"It isn't worth the beating up you get." When he entered college he proclaimed his total lack of interest in fraternities. His mother stated that he was afraid of the physical punishment he would get at initiation. He always had a "frightful imagination" about things that could happen. His intolerance of the unknown or the new had a long history beginning with his early fears. It appeared both as a reactive anxiety and as a protective technique of avoidance.

Attention demanding and show-off.—The school record is crowded with testimony on this behavior: in kindergarten, "Wants center of stage"; first grade, "Tattles"; second grade, "Constant talker. Wants attention"; fourth grade, "The show-off of class"; sixth grade, "Pronounced show-off. Flair for words"; eighth grade, "Violent reciter." In senior high, he had parts in noontime shows and a lead in the senior play.

His father stated that the boy was fond of reading the dictionary and had always loved to use long words. "He is an awful actor and has developed a superficial personality, just turns on the charm to get what he wants."

Temper tantrums.—This form of behavior persisted through the first 9 years. It was followed by pronounced mood swings. Considerable disharmony in the home was resented by the boy who was very critical of both parents. He thought he had too many home chores, and he often took long walks alone. At 15, he stated he was often sulky at home and realized he was quite intolerant in many areas. The mother described him as self-centered, never giving a thought to the feelings of other people, always trying to get something for nothing.

At 17, he was irritable and negativistic at home. He resented all home chores. "We kids do as much work there as our parents do. We are just people who live in the same house. None of us respect any of the others. My parents think it's their duty to break the spirit of their kids. They worked hard on me but have learned they can't win—I just shrug my shoulders and leave home. When I get married I'm going to spend a lot of time with my family—not just work on the yard."

This boy's Summary Sheet of Problem Incidence looks fairly mild. Only four problems are reported in as many as half of the interviews. His mother, however, tended to under- rather than overreport. She wanted to "believe in the good" and frequently was herself unclear about both ends and means. She had encountered her share of problems in her life but appeared to prefer detouring rather than resolving them. So, as she approached fifty, there was much of the adolescent wrapping still showing. She had very mixed feelings about her family and home. She had enthusiasms, but fixed loyalties were difficult to discover.

SUMMARY OF PROBLEM INCIDENCE - CONTROL GROUP GIRLS

Shaded areas indicate ages at which Case 320 had a problem

Case Number 320

Data from Parents ▨

Age #	0	1	2	3		4	5	6	7	8	9	10	11	12	13	14	15 PROBLEM TITLE
1		13*	29	▨ 28	▨ 22	29	35	23	▨ 23	▨ 28	▨ 47	▨ 42	▨ 26	▨ 15	▨ 4	▨	Disturbing Dreams
2		27	▨ 22	4	2	10	2	10	▨ 12	▨ 5	15	16	▨ 17	9	0		Restless Sleep
3		▨ 43	2	4	2	0	2	▨ 2	0	0	0	0	0	0	0		Diurnal Enuresis
4		▨ 73	31	30	20	10	10	8	14	9	6	10	7	0	0		Nocturnal Enuresis
7		10	6	17	▨ 29	▨ 31	▨ 37	▨ 19	▨ 21	▨ 9	▨ 9	13	14	0	0	▨	Poor Appetite
9		▨ 37	▨ 43	36	▨ 31	▨ 31	▨ 51	15	16	▨ 14	▨ 9	▨ 10	▨ 24	▨ 3	▨ 4		Food Finickiness
11		5	22	▨ 26	24	25	16	12	5	16	26	13	21	18	17		Modesty
12		0	0	0	4	0	0	0	0	0	0	0	0	0	0		Exhibitionism
13		▨ 8	4	▨ 6	8	6	2	4	2	0	0	0	0	0	0		Masturbation
14								0	0	0	0	0	0	3	0		Sex Interest
15		3	4	4	2	6	▨ 10	4	▨ 5	▨ 5	0	0	0	0	0		Tics, Mannerisms
18		3	10	17	14	17	20	27	23	35	32	▨ 40	▨ 31	▨ 26	▨ 22	▨	Nailbiting
19		▨ 33	▨ 36	▨ 28	▨ 27	▨ 19	▨ 16	▨ 12	▨ 12	▨ 5	6	3	2	0	0		Thumbsucking
20		▨ 17	▨ 33	▨ 34	35	35	29	23	▨ 16	▨ 19	15	16	2	0	0		Overactivity
21		17	18	17	▨ 10	8	8	6	▨ 12	▨ 9	3	5	5	0	4		Speech Problems
22		0	12	36	▨ 49	▨ 42	▨ 49	12	▨ 19	▨ 21	▨ 12	0	0	0	0		Lying
22a		0	0	▨ 8	▨ 6	2	4	0	0	0	0	0	0	0	0		Truancy – Home
22b								0	0	0	0	0	0	0	0		Truancy – School
23		3	18	2	▨ 6	4	0	0	5	0	0	0	0	0	0		Stealing
24		2	▨ 20	13	12	10	▨ 8	▨ 6	▨ 5	▨ 5	▨ 6	0	▨ 2	0	0		Destructiveness
26								12	▨ 12	5	▨ 9	5	▨ 7	0	▨ 4		Nonsharing
27								2	▨ 5	▨ 2	▨ 12	5	▨ 7	3	0		Quarrelsomeness
28		8	14	13	14	21	20	27	7	16	21	24	17	9	9		Emot. Dependence
29		▨ 27	▨ 26	▨ 15	▨ 18	▨ 15	▨ 18	▨ 19	▨ 14	▨ 7	▨ 12	0	▨ 5	3	0		Atten. Demanding
35		18	31	47	51	52	▨ 53	50	49	▨ 46	38	45	48	41	52		Oversensitiveness
36		25	24	38	24	35	31	23	30	30	24	21	21	12	13		Physical Timidity
36b								25	21	21	24	37	21	18	26		Shyness
37		33	67	60	45	▨ 36	▨ 41	▨ 33	▨ 35	▨ 21	26	▨ 40	21	21	17		Specific Fears
38		8	12	22	16	12	▨ 22				32	▨ 40	▨ 24	26	▨ 30	▨	Mood Swings
38a		0	0	8	14	26	33	8	19	26	21	26	29	15	22		Somberness
40		18	26	23	37	19	29	10	▨ 9	▨ 5	9	▨ 10	▨ 10	▨ 12	▨ 9	▨	Negativism
41		3	8	▨ 17	24	4	▨ 16	4	▨ 7	5	12	▨ 13	▨ 10	9	4	▨	Irritability
42		▨ 43	▨ 53	▨ 51	47	▨ 38	51	▨ 56	▨ 28	▨ 30	▨ 32	▨ 34	▨ 29	▨ 15	▨ 9	▨	Temper Tantrums
43		20	29	40	▨ 22	▨ 38	26	▨ 33	▨ 28	▨ 28	▨ 35	24	31	▨ 29	▨ 22	▨	Jealousy
44								19	▨ 12	5	3	0	2	0	0		Competitiveness
46								▨ 29	▨ 21	▨ 14	▨ 6	▨ 5	▨ 7	3	4		Unself-reliant
45						38	47	40	42	37	59	47	38	24	35		Reserve
		59	54	58	66	55	62	59	83	91	64	60	72	61	68		Total Problem Z-Score
Age	0	1	2	3		4	5	6	7	8	9	10	11	12	13	14	15

* Group percent incidence shown in cells

Fig. 56

The boy knew he didn't like his home, he knew he didn't approve of his parents, but he had no other place to go or other pattern of behavior to adopt. He had been afraid of group affiliations so he was quite without supports. He could make money, and this became important to him.

He was married while he was in college. He and his wife both worked while he continued in school. The following year he reported that he should not have married when he did, that he was too immature and not ready to settle down. It had been a rough year on his wife, he stated.

At 22, he was drafted into service and the first baby was born the following year.

Case 320. Girl with High Problem Incidence

Case 320 was an only child. Her mother had made two unsuccessful attempts at marriage and was frustrated, immature, and unrealistic. The mother and this girl lived for the most part with the mother's parents and the mother and grandfather indulged in constant bickering. The daughter "joined in the fray" at an early age.

This girl's problems, as reported by the mother, were always more numerous than the average of the group. She was a *thumbsucker* from about 4 months, and this continued through 9 years. This was followed by *nailbiting* throughout the period of the study. At 18 months she was eating when and what she liked, she was sleeping very irregularly, and was a mouth breather which resulted in snoring. The problems which were present for 6 years or longer were:

Disturbing dreams.—Reported at 3½ and 4 years and then from 8 years on. She and her mother shared a room always. Talking in sleep, calling out children's names, and screaming were reported from 9 through 15 years.

Poor appetite and food finickiness.—At 6 years, she was still being fed some of her breakfast in order to get her to school; at 9 years, she was causing "a commotion" about some food at every meal; at 11 years, she demanded hot seasonings on everything. She ate candy whenever she could get it, which was very often, but ate few fruits and vegetables. Facial acne was noted from 11 years on.

Thumbsucking and nailbiting.—She was wearing thumb guards at night through 7 years and sucking thumb at school at 9 years.

Destructiveness.—The only 12-year-old girl in the study showing this behavior. "A devilish streak" mother called it. This was within four months of menarche and was accompanied by *mood swings* and *irritability*. The presence of this behavior through the years could easily have had its origin in the overcrowded living of the bickering three-generation household.

Attention demanding and seeking assistance.—These tools were used through the first twelve years. She demanded (and received) help with feeding through the first six years and was still wanting help with dressing at 11. At 9, she insisted that she could get to sleep more easily if her grandmother rubbed her head. Some of her fears, such as of going to bed and of the dark, seemed bids for attention.

Tempers.—Tempers were a family luxury indulged in by all but grandmother. Mother stated: "We all have violent tempers, all but my mother. My daughter and I fight, my father and I fight, my daughter and my father fight."

Negativism.—This was a behavior pattern that the girl shared with only 12 per cent or fewer of the girls from 8 years on.

Jealousy.—This showed up when mother waited on the grandmother or when the mother became too engrossed in herself. (The mother was an inadequate narcissist). Jealousy recurred from 4 years on.

This child was never rated as *emotionally dependent*. There was no one on whom to lean. She was never called *reserved*. She wanted friends but had none. She was consistently below the group average in mental ability as measured on tests, and there were no patterns at home of the social amenities. This resulted in floundering unguided isolation. She went alone to movies and ate her candy, popcorn, and potato chips by herself. At 16 she was still seeking friends and stated, "None of the boys at school like me, but I can usually get a sailor."

Her peak problem load was at 8 years when she had nineteen of the thirty-six problems. At school, she had repeated first grade and was older than her classmates. Her teacher reported: "Always a commotion wherever she is; a constant silly laugh or an inane, silly grin; mouth open all the time. Has to have much supervision. Overactive, squeals and jumps around. Sings nicely and plays piano very well." At this age, 8 years, her scale score on the Stanford-Binet was at its lowest. The grandmother was sick and hospitalized. Her satisfactions and supports were almost nonexistent.

She was somewhat early in maturing. She had her adolescent growth spurt between 10½ and 11 years; the group average was at 11½. Menarche was established at 12 years, 5 months—about 4 months earlier than the group average. She was still in elementary school. Skeletal maturity was achieved at 15½ years as against the group average for girls of 16 years, 3.5 months.

In Junior High School, she was in the lowest of four graded sections. One of her teachers reported: "She fails every test. She seems to accept her lack of ability." Another teacher stated: "Some of the youngsters don't care so much for her. She tries to be sociable. Could be a little cleaner and neater."

She seemed to have a fairly good relationship with her grandmother, relatively the most stable person in the household, but she had very poor ones with her mother and grandfather. There were irregular meals, irregular bed times, erratic personal hygiene, overcrowding, little discipline (self or otherwise). The mother seemed to operate at about the child's level in her irresponsible day-to-day living. Self-centered, exhibitionistic, critical, and carping, dreaming of yet another marriage, she was of little help to her lonely, untrained, adolescent daughter.

Our Case 320 graduated from high school at 19. She thought she was engaged the previous year but the man changed his mind. She worked for a time. The grandmother died, and the home situation worsened. She married in her early 'twenties. Two years later she had a baby. Later that same year, they bought a house. For the first time in her life, this girl had her own home, a family largely of her own choosing, companionship, and some security. The early history had promised much less than this.

IX. POSITION IN FAMILY IN RELATION TO PROBLEM BEHAVIOR

THERE WERE not enough children in the group to make a definitive study of the importance of various positions in the family in relation to problem behavior; but it was possible to compare the behaviors of the first-born with the non-first-born. Of the 60 boys, 26 were first-born and 34 were non-first-born; of the 64 girls, 30 were first and 34 non-first-born.

Table 4, chapter ii, gives the per cent of the children in each of the four categories having the specific problems at various ages between 21 months and 14 years. Differences in problem incidence between the first- and non-first boys and girls which are significant are starred. In table 12 these percentage frequencies have been averaged so that it is possible to see which problems for the age range studied have the highest average incidence among first- and non-first-born children. It should be borne in mind that these data are from mothers who are probably more concerned with their first-born and perhaps more relaxed with subsequent ones; and who probably, as good heterosexuals, are more nurturant with their male children and perhaps more demanding, in the sense of having a high sex role expectancy, with their daughters.

Boys who were the first-born in their families had the highest average incidence for the age span on seven problems: *disturbing dreams, mood swings, oversensitiveness, physical timidity, fears, restless sleep,* and *attention demanding*. These differences are small, especially for the last two problems. These are essentially internalizing behaviors. The age levels at which the first-born boys had significantly more of these problems are summarized here from table 4:

Oversensitiveness	at 7 years
Restlessness in sleep	at 8 and 12 years
Disturbing dreams	at 9 and 12 years
Physical timidity	at 9 years
Excessive attention demanding	at 9 years

Boys who were not the first-born had the highest average problem incidence of the four groups compared on ten problems: *temper tantrums, overactivity, jealousy, lying, food finickiness, speech problems, negativism, destructiveness, nocturnal enuresis,* and *insufficient appetite*. The age levels at which the non-first boys had a significantly higher incidence of the problems are summarized from table 4:

Irritability	at 21 months
Jealousy	at 21 months
Destructiveness	at 4 years
Food finickiness	at 7 years

Excessive competitiveness .... at 8 years
Speech problems .... at 10 years
Overactivity .... at 11 years
Temper tantrums .... at 13 years

This listing indicates that the problems of the non-first boys are more overt and competitive. One hypothesis for the fact that, on the average, non-first boys showed a higher average on problems, especially of the acting out variety, is that in a competitive culture, especially for the males, the second-born male is in an inferior and deflating position (granted relative comparability at the same ages) in size and strength, mental age, and achievements; and being a male, strikes back overtly and competitively. We have evidence from our intensive group that the second-born male feels inferior about ability and constantly, in counter-active fashion, strives to equalize matters. We also had evidence that the first-born male (as well as the female) felt threatened by the advent of a younger sibling who disturbed his former monopoly of affection. He was not allowed physical retaliation against a less strong, younger sib and was "hurt," that is, managed his strains by internalization (in dreams, oversensitiveness, mood swings, fears) and by indirect deflation of a younger sib in the sib's area of vulnerability, namely, ability, with such verbalizations as "you're dumb" or, in a long-suffering voice, "here, stupid, let me do it."

Comparison of the average number of problems of first- and non-first boys shows that the age level at which the difference was statistically significant was at 21 months. At this age, the average number of problems of the first-born boys was 4.8, and of the non-first boys was 7.1 problems (fig. 57).

Of the four groups compared, the girls who are the first-born in their families have the highest average incidence on the largest number of problems. Referring back to table 4 we observe that for the following problems first-born girls have a significantly higher incidence than the non-first-born girls at certain age levels:

Excessive demanding of attention .... at 3 and 8 years
Overactivity .... at 5 and 6 years
Tics and mannerisms .... at 6 years
Irritability .... at 6 and 11 years
Shyness .... at 7 and 11 years
Restlessness in sleep .... at 8, 10, and 12 years
Somberness .... at 8, 9, and 11 years
Temper tantrums .... at 8 and 11 years
Nailbiting .... at 9 years
Lying .... at 9 years
Excessive reserve .... at 9 years
Physical timidity .... at 11 years
Mood swings .... at 11 and 12 years
Negativism .... at 11 and 12 years

TABLE 12

Comparison of the Problem-Percentage-Scores for First Versus Non-first Children

Problem	Position in family	Boys		Girls		Mean difference[b]	
		N	Mean (per cent)	N	Mean (per cent)	Boys	Girls
1. Disturbing dreams	First	17	28.0[a]	25	28.4	11.7	5.1
	Non-first	23	16.3	22	23.2		
2. Restlessness in sleep	First	17	15.6	25	14.2	2.9	8.3
	Non-first	23	12.7	22	5.9		
3. Diurnal enuresis	First	17	4.9	25	3.8	– 2.8	– 0.3
	Non-first	23	7.7	22	4.1		
4. Nocturnal enuresis	First	17	15.8	25	17.9	– 4.6	– 1.4
	Non-first	23	20.4	22	19.3		
7. Insufficient appetite	First	17	10.6	25	16.7	– 6.3	– 1.9
	Non-first	23	16.9	22	18.6		
9. Food finickiness	First	17	11.9	25	24.5	–15.1	– 2.7
	Non-first	23	27.0	22	27.2		
11. Excessive modesty	First	17	10.4	25	19.4	– 4.6	1.0
	Non-first	23	15.0	22	18.3		
15. Tics and mannerisms	First	17	2.5	25	5.0	– 0.7	3.0
	Non-first	23	3.3	22	2.0		
18. Nailbiting	First	17	13.2	25	28.8	– 3.1	11.9
	Non-first	23	16.3	22	17.0		
19. Thumbsucking	First	17	3.1	25	10.1	– 6.8	–13.4
	Non-first	23	9.9	22	23.5		
20. Overactivity	First	17	31.5	25	23.9	– 5.2	9.8
	Non-first	23	36.7	22	14.1		
21. Speech problems	First	17	4.9	25	13.6	–13.1	7.8
	Non-first	23	18.1	22	5.8		
22. Lying	First	17	23.2	25	21.4	– 5.0	– 0.2
	Non-first	23	28.3	22	21.6		
22a. Truancy from home	First	17	1.9	25	2.2	– 0.8	1.3
	Non-first	23	2.7	22	0.8		
23. Stealing	First	17	3.9	25	2.3	– 4.6	– 1.1
	Non-first	23	8.6	22	3.4		
24. Destructiveness	First	17	11.2	25	8.0	– 5.0	3.7

	Non-first	23	16.3	22	4.2		
26. Selfishness in sharing	First	16	14.3	23	10.4	− 1.5	5.2
	Non-first	20	15.8	21	5.1		
27. Quarrelsomeness	First	16	4.5	23	7.7	− 5.1	6.4
	Non-first	20	9.6	21	1.2		
28. Excessive emotional dependence	First	17	10.7	25	18.3	− 4.8	7.6
	Non-first	23	15.5	22	10.7		
29. Excessive attention demanding	First	17	19.4	25	19.8	2.7	11.2
	Non-first	23	16.7	22	8.6		
35. Oversensitiveness	First	17	40.4	25	43.0	5.2	− 5.7
	Non-first	23	35.2	22	48.7		
36. Physical timidity	First	17	22.9	25	27.2	6.8	0.4
	Non-first	23	16.1	22	26.8		
36b. Shyness	First	16	5.1	23	36.0	−11.5	25.0
	Non-first	20	16.6	21	11.0		
37. Specific fears	First	17	42.1	25	39.2	4.3	2.6
	Non-first	23	37.8	22	36.6		
38. Mood swings	First	16	26.1	25	28.5	6.4	16.4
	Non-first	24	19.7	22	12.0		
38a. Somberness	First	17	10.4	25	23.1	− 5.4	9.5
	Non-first	23	16.3	22	13.5		
40. Negativism	First	17	21.8	25	20.4	− 0.6	8.1
	Non-first	23	22.4	22	12.3		
41. Irritability	First	17	11.9	25	15.5	− 0.8	11.0
	Non-first	23	12.7	22	4.5		
42. Temper tantrums	First	17	46.9	25	45.6	− 9.7	12.2
	Non-first	23	56.6	22	33.5		
43. Jealousy	First	17	31.9	25	35.0	− 3.4	12.7
	Non-first	23	35.3	22	22.3		
44. Excessive competitiveness	First	16	3.2	23	6.1	−11.1	− 0.8
	Non-first	20	14.4	21	6.9		
46. Unself-reliance	First	16	16.0	23	14.8	− 6.8	6.4
	Non-first	20	22.8	21	8.4		
45. Excessive reserve	First	15	28.0	24	44.5	− 6.2	6.9
	Non-first	20	34.2	21	37.6		

---

[a] Problem-percentage-scores = sum of "plusses" obtained by child at 8 or more age levels from age 21 months to 14 years on a particular behavior item, divided by number of age levels for which data have been obtained for that child; this quotient being multiplied by 100.

[b] First minus non-first.

AVERAGE NUMBER OF PROBLEMS OF FIRST-BORN AND NON-FIRST BORN CHILDREN

CONTROL GROUP

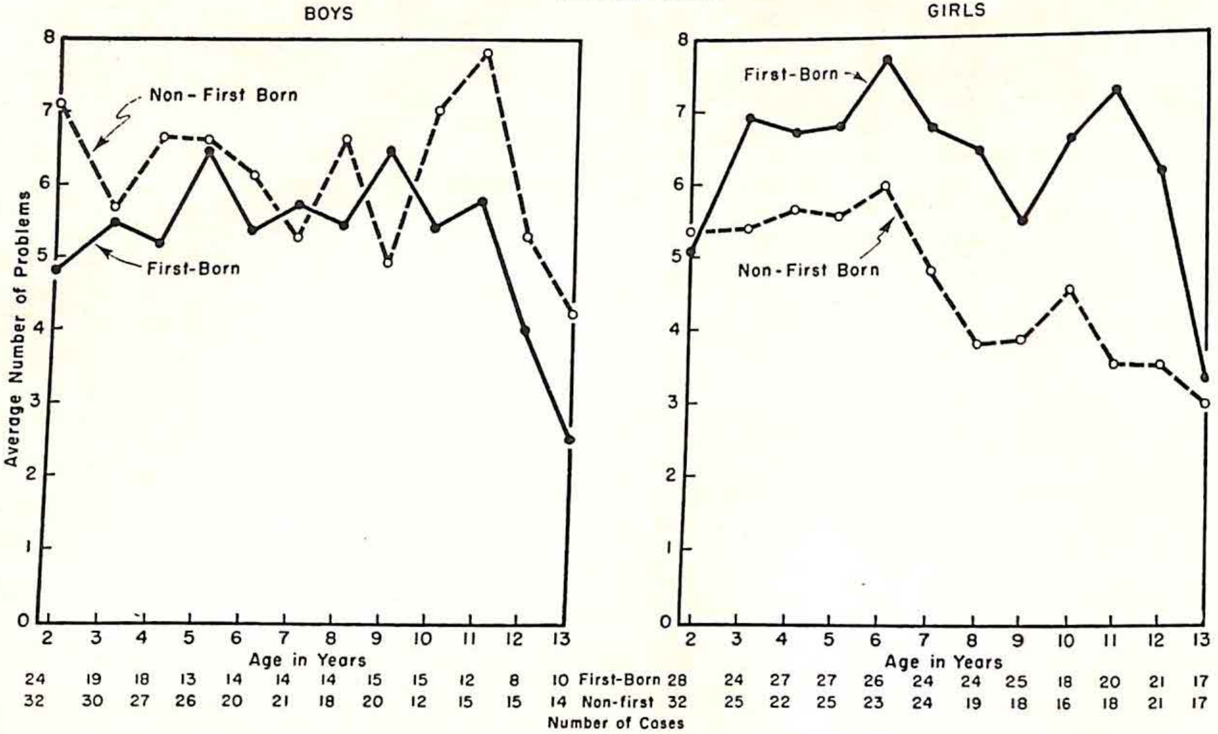

Fig. 57

These findings of many significant differences between first- and non-first-born girls and the further fact that the first-born girl has a higher frequency of so many problems indicating tension, disturbance, and withdrawal, especially at ages 6 and 11, suggest that first-born girls have more straining times early (around 6) and also at 11, although more tensional correlates occurred at 5 for girls than at 12. Eleven is not only a year in which many of the girls are approaching menarche, but there are the associated changes in behavior and dress during the last year at elementary school. This is the beginning of the period of slavish adherence to the peer culture, and the concomitant rejection of parental and especially maternal, suggestion. This is a period involving perhaps more strain for the mother than the earlier period but, in view of the correlates, perhaps less for the daughter. It is understandable that for the girl who is not a first-born, the mother-daughter tension would be less marked because the mother would know better what to expect at this age level and would have lowered her high expectations. The problems probably exist as reported but they may have been precipitated *in part* by the mother's efforts "to do what is right" at a time when the girl is irritable and trying to withdraw from parental solicitude.

The comparison of the average number of problems of the first- and non-first girls shown in figure 57 further indicates the increasing differences. The average difference in total number of problems is significant at the 1 per cent level at 11 years and at the 5 per cent level at 8 and 12 years.

There are only two problems which have significantly higher frequencies for non-first girls, *specific fears* at 21 months and *oversensitiveness* at 4 years; and only two problems which the non-first girls have on the average in greater numbers: *oversensitiveness,* which is in large part a coping device, and *thumbsucking* which, at all age periods, has nothing but negative correlations with all other problems. Possibly mothers are more tolerant of *thumbsucking* in their second children. It will be observed that the incidence of *thumbsucking* of non-first boys is also higher than for the first-born boys. The non-first-born girl obviously has an easier time of it, unlike the non-first boy; being in an inferior or passive role does not conflict with the appropriate sex stereotype and, unlike her older sister, she has not had the pronounced libidinal threat and the inhibiting role of behaving well to the object of her threat. Even with younger sibs, her loss of parental love is from a 50 per cent basis or less, and not from a 100 per cent basis as is true of the first-born.

In summary, the most impressive finding is that there are significant differences in the problems of first-born and non-first-born children, and that these differences are most marked for girls among whom the first-born have more problems, especially those indicating tension and withdrawal, with peaks at 6 and at 11 years. The first-born boys have more withdrawing and internalizing patterns; the second-born boys more overt and competitive aggressive patterns.

X. INTERRELATIONSHIPS IN PROBLEM BEHAVIOR

To WHAT EXTENT is problem behavior interrelated? Which problems have the most correlates and which the fewest? That is to ask, which problems seem more pervasively tied to a large segment of the child's behavior, and which seem more specific and relatively unrelated to a wide range of behavior? Are the children who act out, are expressive, and relieve tension, or the children who internalize, more apt or less apt to have an array of associated problems? To what extent are the interrelationships obtained at one age level maintained at subsequent age levels? Data which bear on these questions will be considered in this chapter. To secure as full answers as possible would have involved relating every problem at each age to every problem at every other age, a task of gigantic proportions not yet undertaken. To date, only cross-sectional interrelationships have been computed and for only four age levels.

Interrelationships between problem behavior scores have been computed at the following age levels: 21 months, 3 years, 5 years, and 12 years. Tables of intercorrelations are presented for ages 5 and 12 (see tables 14 and 15). At 21 months and 3 years, tetrachoric coefficients of correlation were computed between the presence or absence of one problem as compared with the presence or absence of another problem for boys and girls separately. Certain coefficients could not be computed because the problem incidence for one or another of the problems was too low. At the 5-year and 12-year levels, Pearsonian coefficients of correlation were computed between all of those problems where the distributions justified such a procedure (see figs. 1–24 which present the distributions of the codings).

We will summarize the findings in three ways: (1) by listing the problems in order of the magnitude of significant correlates obtained at two age levels; (2) by presenting cluster analyses which show the various groups of problems having similar degrees of relationships to all the other problems at one age, namely, age 5; and (3) by presenting tables of intercorrelations at ages 5 and 12, tables not yet factored but with which others can play, as we shall, too, at a later date.

To obtain some measure of the behaviors which seemed most significantly related to other problems, we chose 5- and 12-year correlates of the fourteen behavior problems because, having adequate distributions at both years, they offered better data for the comparison.

TABLE 13

SIGNIFICANT POSITIVE INTERPROBLEM CORRELATIONS ON FOURTEEN PROBLEMS AT YEARS 5 AND 12 ARRANGED ACCORDING TO GROSS TOTAL NUMBER

Behavior problems	5 years			12 years			5 + 12 totals		
	Boys (N = 39 42.8 per cent)	Girls (N = 52 57.2 per cent)	Total (91)	Boys (N = 23 35.3 per cent)	Girls (N = 42 64.7 per cent)	Total (65)	Boys totals	Girls totals	Grand total
Irritability	5	11	16	12	6	18	17	17	34
Overdependence	5	12	17	7	4	11	12	16	28
Mood swings	5	10	15	10	3	13	15	13	28
Negativism	6	5	11	7	3	10	13	8	21
Somberness	2	9	11	4	4	8	6	13	19
Tempers	1	7	8	6	4	10	7	11	18
Reserve	2	5	7	7	4	11	9	9	18
Attention demanding	3	5	8	5	3	8	8	8	16
Timidity	2	8	10	0	5	5	2	13	15
Oversensitiveness	0	4	4	6	4	10	6	8	14
Jealousy	0	2	2	8	3	11	8	5	13
Poor appetite	0	7	7	4	2	6	4	9	13
Modesty	0	0	0	6	2	8	6	2	8
Nailbiting	0	2	2	0	0	0	0	2	2
Totals	31	87	118	82	47	129	113	134	247
Totals with duplicates excluded	17	49	66	49	26	75	66	75	141

If we use the number of correlates as a criterion of the significance of behaviors or characteristics, we find that the classificatory concept of *irritability,* which was a descriptive continuum for degree of tension ranging from "trigger responsive" to "phlegmatic," leads all other problem categories. *Excessive dependence* and *mood swings* follow, then *somberness, negativism, reserve,* and *tempers* (table 13).

If we look at the age differences, we find slightly more significant correlations at 12 (seventy-five) than at 5 (sixty-six). Because 12 is closer to adolescence, we expected a greater difference between these two ages. If we look at sex differences between these two ages, we find very marked differences, the girls at 5 having forty-nine significant correlates of these fourteen problems, the boys, seventeen. At 12 years, the picture is reversed—it is the boys with forty-nine significant correlates who lead the girls who have twenty-six. Whatever the causes, age 5 appears as a much more tensional period for girls in terms of pervasive correlates, and age 12 appears a more tensional period for boys. We have some hypotheses about this age difference in tension between boys and girls which must await testing until further analyses can be made of all the behavioral correlations, cross sectional and longitudinal. Our hypothesis is that because of the sizable differences in the ages at which cultural pressures are differentially brought to bear on the two sexes with respect to overt expressive patterns of aggressive behavior, the girls are faced much earlier with the ambiguity of learning what can be overt and what must be inhibited and internalized, and with the strain of learning controls and how to internalize. The high number and the nature of the correlates in girls at age 5, namely, *irritability, overdependence, mood swings, somberness,* and *tempers,* indicates the mixed picture. It is of especial interest to note that at age 5, the number of boys exploding into *tempers* significantly exceeds the girls (59 per cent to 38 per cent), yet it is the girls at this age who exceed the boys, seven to one, in correlates of *tempers. Tempers* in girls, that overt behavior the well-behaved girl should be without according to the cultural stereotype, is a symptom of pervasive disturbance. With boys it appears more a mechanism of release and coercion and a pattern more acceptable in terms of the male stereotype, and is not tied to pervasive disturbance. Similarly, the boys are involved in this internalization-externalization dilemma and their independence-dependence conflict at age 12, and the significant behavioral correlates are numerous. Whether before 12 or later, significant correlates occur to a greater or less degree, has not yet been determined.

If we look at the problems where greatest differences in the number of correlates occur for boys and girls, we find that *negativism* leads in boys and *somberness* and *physical timidity* lead for girls when both ages are included. That is, girls use withdrawal and boys use active resistance even as early as age 5, when *negativism* is the problem with the highest number of correlates for boys—the only problem in which boys exceed girls in significant correlates at the girls' high tension period.

The fact that the total number of significant correlates (that is, for both ages) is higher for the girls (75 to 66) is the result of the appreciably smaller number of boys, especially at age 12, which meant that higher correlations were necessary to reach an adequate significance level. These comparative figures have limitations, although the fact that boys exceed girls significantly at age 12, even with an appreciably smaller sample, indicates that the number of correlates at 12 for boys are at least that large, and that more might appear with larger samples.

Behavioral correlation tables are presented for years 5 and 12 for the sexes separately. These correlations have been described for each problem but we are deferring further analysis until a comprehensive study of interrelationships, cross-sectionally and through time, can be completed.

In summary, even by the method of nonintensive interviewing, the obtained data yield evidence of many significant relationships at the limited number of age levels analyzed. Certain coded problems or characteristics, such as *irritability, excessive dependence,* and *mood swings,* with *negativism* and *somberness* close behind, are more highly related to more problems than are others. This probably means that these classifications are more encompassing and/or represent more enduring patterns. On the other hand, the ages chosen for analyzing may have been years of unusual crisis when the child was trying out a variety of behaviors. Until we have analyzed cross-sectionally the other ages and longitudinally the behavioral interrelationships, more definite statements cannot be made about the enduring behavior and the more transitory coping devices. From our 5- and 12-year analyses it is clear that there are marked age-sex differences which we hypothesize are related to the greater social pressures for control and internalization that are applied to girls earlier than to boys. More basically, this may mean that in the initial stages of the learning of control and internalization more pervasive uneasiness and stress is generated than at the later stages of learning. At least it appears a promising hypothesis to pursue in respect to the theory of personality development.

TABLE 14

Intercorrelations of Behavior Problem Codings at 12 Years

(Boys above, girls below the diagonal)[a]

Behavior problems	Disturbing dreams	Restlessness in sleep	Insufficient appetite	Food finickiness	Excessive modesty	Nailbiting	Enunciation defects	Lying	Overdependence	Attention demanding	Oversensitiveness	Physical timidity	Mood swings	Somberness	Negativism	Irritability	Temper tantrums	Jealousy	Excessive reserve
Disturbing dreams...		.52*	.22	.29	.19	.07	−.16	.20	.27	.28	−.05	...	.38	.08	.33	.60**	.41*	.16	.18
Restlessness in sleep..	.15		.03	.23	.07	−.08	−.48*	.02	.15	.31	−.22	...	.29	.16	.07	.27	.32	.17	−.03
Insufficient appetite..	−.10	.06		.58**	.01	.11	.16	.49*	.21	.50*	.02	...	.20	−.22	.11	.24	.22	.47*	−.16
Food finickiness......	.28	.21	.38*		.20	.04	−.14	.60**	.51*	.47*	.14	...	.36	.20	.35	.58**	.45*	.71**	.29
Excessive modesty....	−.26	.03	.09	.09		.17	.16	.40	.52*	.03	.59*	...	.63**	.26	.44*	.43*	.09	.25	.45*
Nailbiting............	.15	−.03	.04	.15	−.23		.17	.39	−.05	.10	.34	...	.25	−.16	.19	.33	−.13	.36	.06
Enuciation defects....	−.29	.05	.15	−.20	.16	−.07		.32	.26	.26	.29	...	−.13	−.14	.00	.00	.00	−.14	.00
Lying...............	...	...	...	...	...	...	...		.56**	.53**	.52*	...	.50*	.13	.55**	.67**	.39	.63*	.37
Overdependence......	−.31*	.23	.29	.05	.26	−.17	.10	...		.37	.35	...	.53**	.40	.57**	.47*	.29	.24	.54*
Attention demanding	−.01	.48**	.23	.21	.09	.10	−.01	...	.16		.26	...	.08	−.17	.27	.44*	.39	.42*	−.21
Oversensitiveness.....	−.06	.10	.03	−.24	.24	−.34*	.23	...	.25	−.17		...	.48*	.34	.37	.44*	.23	.46*	.47*
Physical timidity.....	.11	.13	.00	−.06	.32*	−.17	.17	...	.45**	.06	.33*		...	...	...	...	...	...	...
Mood swings..........	.23	.36*	−.01	.26	.14	−.12	−.09	...	.28	.25	−.12	.20		.49*	.65**	.70**	.49*	.47*	.62**
Somberness...........	.01	.17	.10	−.03	.23	−.26	.30	...	.56**	−.21	.52**	.56**	.24		.42*	.26	.46*	.26	.81**
Negativism...........	−.04	.18	.15	.16	.30	−.01	.21	...	.23	.21	.31*	.02	.52**	.16		.73**	.34	.34	.53**
Irritability...........	.18	.40**	.15	.18	.15	−.10	−.01	...	.30	.41**	.14	.16	.50**	.15	.56**		.60**	.60**	.48*
Temper tantrums....	−.02	.32*	.37*	.29	.07	.12	.00	...	.19	.35*	−.30	−.07	.22	−.19	.30	.43**		.50*	.36
Jealousy.............	−.29	.15	.22	−.09	.35*	−.36*	.18	...	.51**	.26	−.23	.32	.28	.24	.27	.42**	.26		.24
Excessive reserve.....	.03	.20	−.03	−.04	.24	−.25	.29	...	.37*	−.24	.35*	.50**	.10	.74**	.03	−.01	−.22	.16	

... Distribution did not justify computation of correlations.
* Indicates correlations significant at the 5 per cent level.
** Indicates correlations significant at the 1 per cent level.
[a] Boys: N = 23; per cent = 35.3. Girls: N = 42; per cent = 64.7

CLUSTERS OF PROBLEMS WHICH ARE SIMILARLY RELATED TO OTHER PROBLEMS AT 5 YEARS

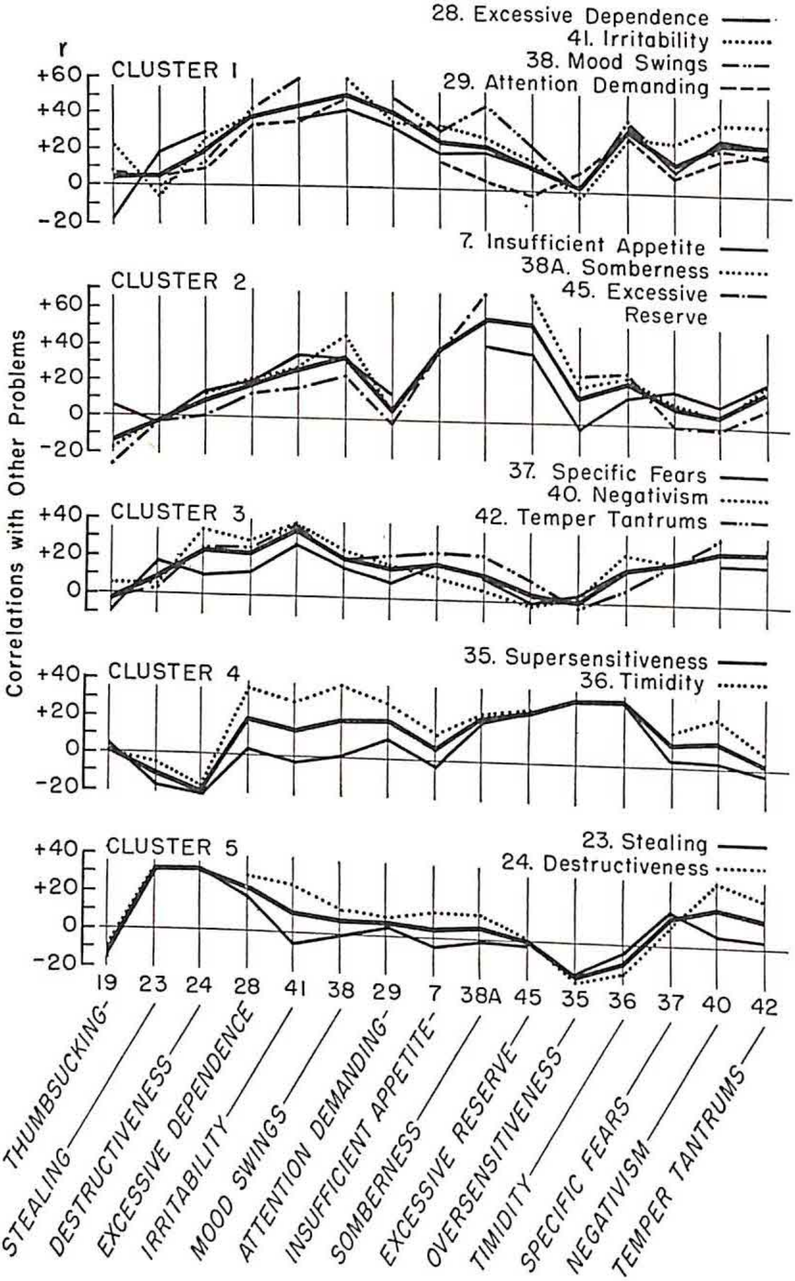

Fig. 58

Cluster 1 contains *mood swings, irritability, overdependence,* and *attention demanding* with zero correlations for *thumbsucking, stealing, destructiveness,* and *oversensitiveness.* This cluster suggests emotional expressiveness and variability, high reactivity, and interaction with elements of confusion (moodiness) and attention-demanding techniques.

Cluster 3 contains *fears, negativeness,* and *tempers,* and is similar to cluster 1 save for lower magnitude correlations on the four clustered problems of cluster 1, especially with respect to *moodiness* and *overdependence,* and to a lesser extent with physical timidity. This cluster suggests high emotional reactivity without the complexity, variability, or ambiguity of cluster 1.

Cluster 4, containing *oversensitiveness* and *timidity,* is not a tight cluster and is somewhat like cluster 1 except that the top problems of cluster 1 are lower for cluster 4; *oversensitiveness* is high and was low for cluster 1; and further, although zero correlations occur for *destructiveness* and *stealing* in cluster 1, in cluster 4 these are negative and *tempers* are at zero in contrast to cluster 1. This cluster appears to represent a combination of vulnerability and inhibited defensive patterns.

Cluster 2 contains *somberness, reserve,* and *insufficient appetite,* and, in some ways, is the reverse of clusters 1 and 3, and represents emotional withdrawal and a low level of reaction and interaction.

Cluster 5 contains *destructiveness* and *stealing* as its high peaks, and *negativism, tempers,* and *fears* as secondary peaks. It is further characterized by negative correlations to *oversensitiveness,* and low ones to *overdependence* and *mood swings.* It is essentially an acting out cluster with little or no internalization.

In a previous unpublished manuscript, we had a cluster analysis derived from a table of intercorrelations for a limited number of problems (fifteen) at age 5 with the sexes combined. With the later analysis which showed sex differences in behavioral correlates at ages 5 and 12, we found that the combining of data from the two sexes masked a number of correlations. A combined sex intercorrelation table does show, however, what problems "hang together" for the children regardless of sex (five clusters were obtained).[6]

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[6] Clusters prepared by Claire Myers Vernier.

TABLE

INTERCORRELATIONS OF BEHAVIOR

(Boys above, girls

Behavior problem	Disturbing dreams	Restlessness in sleep	Insufficient appetite	Food finickiness	Excessive modesty	Nailbiting	Thumbsucking	Overactivity	Lying
Disturbing dreams		...	.05†	.19†	−.21†	...	...	−.16†	.25†
Restlessness in sleep	.46†		...	...	...	...	...	...	...
Insufficient appetite	−.26†	.14†		.10†	−.13	.08	.19	−.06	.12†
Food finickiness	.07†	.14†	.57*†		−.37†	...	...	.17†	−.26†
Excessive modesty	.04†	−.10†	.11	.32†		−.13	−.11	.18	−.20†
Nailbiting	.11†	...	.04	.26†	−.10		−.06	.19	...
Thumbsucking	.22†	.00†	.03	.35†	.17	−.07		.23	...
Overactivity	.12†	−.24†	.09	−.22†	.15	−.09	.02		−.28†
Lying	−.19†	.53†	.43†	.55†	−.07†	−.15†	−.22†	.19†	
Stealing	...	...	−.12	...	−.06	−.20	−.13	.01	...
Destructiveness	−.16	...	.14	.42†	.03	−.09	−.09	.05	−.04†
Overdependence	−.03†	...	.27*	−.07†	.07	.28*	−.20	.01	.06†
Attention demanding	.16†	...	.23	.12†	.06	.26	.06	.03	.53*†
Oversensitiveness	.31†	.12†	−.03	−.04†	.17	.17	.01	−.06	−.05†
Timidity	.27†	−.24†	.18	.06†	.01	.24	.10	−.06	.19†
Specific fears	−.22†	.34†	.31*	.17†	.20	−.11	−.16	.02	.38†
Mood swings	.07†	...	.47**	.04†	.22	.21	.13	.28*	.36†
Somberness	.16†	.49†	.55**	.26†	.15	.10	−.14	.05	.56*†
Negativism	.02†	.00†	.17	.18	.17	.12	.07	.04	.14†
Irritability	...	...	.46**	...	.22	.32*	.26	.08	...
Temper tantrums	−.11†	.31†	.40**	.28†	.10	.09	−.03	−.09	.32†
Jealousy	−.11†	.01†	.15	.51*†	.24	−.01	.22	.06	.32†
Excessive reserve	.18†	.56†	.47**	.39†	.22	−.03	−.26	.09	.20†

... Distribution did not justify computation of correlations.

* Indicates correlations significant at the 5 per cent level.

** Indicates correlations significant at the 1 per cent level.

† Tetrachoric *r*'s were computed for four variables where the distributions precluded computation of Pearsonian *r*.

[a] Boys: N = 39; per cent = 42.8. Girls: N = 52; per cent = 57.2.

15
PROBLEM CODINGS AT 5 YEARS
below the diagonal)[a]

Stealing	Destructiveness	Overdependence	Attention demanding	Oversensitiveness	Timidity	Specific fears	Mood swings	Somberness	Negativism	Irritability	Temper tantrums	Jealousy	Excessive reserve
...	−.08†	...	.08†	.08†	−.09†	−.16†	...	.47†	.32†	...	−.07†	.47†	.16†
...	...	...	...	...	...	...	...	...	...	...	...	...	...
.06	.13	.08	.02	.00	.12	.01	.14	.24	.05	.25	.02	−.04	.25
.33†	.57†	−.15†	−.05†	.17†	.09†	.17†	...	.01†	.27†	.64†	−.30†	.21†	−.50
−.14	.11	.27	−.10	.10	.14	−.29	.01	−.03	.00	.03	−.09	−.20	.15
.27	.27	−.06	−.02	−.27	−.15	.26	.26	.15	.15	.04	.02	.17	.00
−.14	.10	−.13	.07	.06	−.44**	.11	−.04	−.26	.11	.23	.20	.14	−.30
.25	.38*	.09	.12	.05	−.08	.05	−.02	−.26	.11	.06	−.28	.03	−.18
.38†	−.44†	.18†	.38†	−.28†	.30†	.36†	...	−.31†	.30†	.03†	−.13†	.37†	.13†
	.27	.07	.15	−.27	.11	.12	.08	−.04	.13	.00	−.22	.10	.04
.37**		.28	.19	−.21	−.10	.02	.31	.18	.43**	.39*	−.01	.06	.01
.28*	.35**		.38*	−.20	.54**	−.17	.51**	.02	.33*	.35*	.04	−.21	.10
−.03	.06	.32*		.02	.19	−.02	.51**	−.18	.21	.31*	.30	.01	−.16
−.04	−.16	.20	.19		.13	−.02	−.23	.06	−.32	−.26	.09	.05	.28
−.13	−.15	.28†	.37**	.47**		.11	.26	.19	.28	.12	−.06	−.12	.35*
.23	.16	.35**	.19	.10	.27		−.02	−.22	.32*	.15	.07	.23	−.25
−.06	.03	.37**	.47**	.20	.48**	.31*		.34*	.32*	.55**	.28	.05	.14
−.01	.05	.35**	.26	.36**	.33*	.41**	.57**		−.08	.08	.04	.00	.74**
−.02	.26	.28*	.18	.37**	.27*	.10	.18	.19		.49**	.40*	.08	−.11
−.09	.16	.41**	.40**	.23	.44**	.43**	.63**	.52**	.29*		.30	.20	.00
.21	.41**	.42**	.20	−.07	.22	.29*	.19	.37**	.30*	.49**		.20	.10
.05	.07	.17	.32*	.19	.21	.04	.30*	.09	−.06	.14	.21		.03
−.07	−.01	.17	.11	.28*	.26	.19	.32*	.67*	.08	.33*	.11	−.11	

XI. PHYSICAL FINDINGS IN RELATION TO PROBLEM BEHAVIOR

COMPLETE physical examinations were given the children at the Institute of Child Welfare at the age of 21 months and then on their yearly birthdates beginning at 3 years. In addition to measuring and examining the child, certain evaluations were made by the physicians, and one of these (nutritional or physiological status) has been related to the children's problems at three age levels.

RELATION OF PHYSICIANS' RATINGS OF NUTRITIONAL STATUS TO THE INCIDENCE OF PROBLEM BEHAVIOR

The ratings of nutritional status were based on the following data obtained by the physician:

- Weight for height and age
- Subcutaneous tissue
  - Thickness: abdominal and interscapular
  - Turgor: abdominal and interscapular
- Muscle tonus (biceps, recti, and quadriceps)
- Skin and mucous membrane vascularity

The five points of the scale used in assigning the ratings are defined as follows:

5. Markedly above average
4. Definitely above average
3. Average
2. Definitely below average
1. Markedly below average

The physicians' ratings of nutritional status were correlated with the presence or absence of specific behavior problems at age levels 21 months and 3 years for boys and girls (biserial r's). At 5 years, the nutritional ratings were related to the severity of the problem codings (Pearsonian r's). These coefficients are presented in table 16. The distributions did not always justify the computation of biserial r's because of too few cases in the problem category of the dichotimized variable, or of Pearsonian r's where there was an inadequate distribution of problem codings. In such instances the symbol "..." is shown in table 16.

The preponderance of negative correlations in table 16 indicates that children in poor condition nutritionally are likely to have behavior problems. This finding is one that we would expect. There are, however, two significant exceptions. At 21 months, the girls with *speech problems* and *tempers* are above average in nutritional status. All other

TABLE 16

RELATION OF PHYSICIANS' RATINGS OF GOOD NUTRITIONAL STATUS TO PROBLEM BEHAVIOR

Behavior problems[a]	Age in years					
	1¾[b]		3[b]		5[c]	
	Boys (r_{bis})	Girls (r_{bis})	Boys (r_{bis})	Girls (r_{bis})	Boys (r)	Girls (r)
Sleeping habits						
Disturbing dreams	−.09	−.07	−.50**	.25	...	...
Restlessness in sleep	.03	.27	−.41*	−.03	...	...
Elimination						
Diurnal enuresis	−.23	−.07	...	...	...	...
Nocturnal enuresis	−.06	−.13	−.14	−.35	...	...
Soiling	.03	−.09	...	...	...	...
Eating habits						
Insufficient appetite	...	...	...	...	−.16	−.37**
Food finickiness	−.09	−.22	−.33	−.26	...	...
Motor habits						
Nailbiting	...	...	...	...	.16	.08
Thumbsucking	.12	−.22	−.20	−.10	−.06	.07
Hyperactivity	−.02	.12	.17	−.32	−.05	−.13
Speech difficulties	−.38*	.43*	−.29	−.10	...	...
Asocial conduct						
Lying	...	...	−.16	.23	...	...
Stealing	...	...	...	...	−.04	.16
Destructiveness	−.26	...	...	...	−.13	−.14
Personality characteristics						
Overdependence	−.05	−.31	−.27	.14	.01	.04
Excessive attention demanding	−.39*	.06	.09	−.28	−.30	−.16
Oversensitiveness	...	...	...	...	−.08	.03
Timidity	−.18	−.09	.14	−.31	.02	.04
Specific fears	.14	−.07	.06	.19	.02	−.10
Mood swings	...	...	...	...	−.26	−.18
Somberness	...	...	...	...	−.27	−.35*
Negativism	−.19	−.04	−.07	.24	.07	.05
Irritability	...	...	...	...	−.38*	−.27
Temper tantrums	−.42*	.33*	−.36	−.31	−.14	−.28*
Jealousy	−.30	.12	.00	−.17	.12	−.23
Excessive reserve	...	...	...	...	−.24	−.31*
Number of cases	52	57	48	49	39	52

* Indicates correlations significant at the 5 per cent level.

** Indicates correlations significant at the 1 per cent level.

[a] Negative correlations indicate that children with poor nutritional status are more likely to have the problem.

[b] This column of biserial r's was computed between the presence or absence of the problem and the 5-point rating on nutritional status.

[c] These correlations were computed between the 5-point ratings of both nutritional status and problem behavior.

statistically significant correlations are negative, meaning that the children with problems are below par physically. At 21 months, *speech problems, excessive demanding of attention,* and *temper tantrums* are related to poor physical status in boys; and at 3 years, *disturbing dreams* and *restless sleep.* At the 5-year level, the boys who are below average in nutritional status are significantly more *irritable,* whereas the girls are reported as having *insufficient appetite, somberness, temper tantrums,* and *excessive reserve.* It is of interest that poor physical condition is related to withdrawing behavior in girls as young as 5 years (that is, *somberness* and *excessive reserve*). We do not know how much withdrawing behavior is a low physical reaction in girls, and how much is due to the fact that the culture encourages this behavior in face of stress, or whether this type of reaction is a more mature one and therefore girls at 5 years are likely to show it more than boys of the same age. It probably is an admixture of all of them.

RELATION OF SECOND-YEAR DISEASE RATINGS TO THE INCIDENCE OF PROBLEM BEHAVIOR

The only other measure of health considered in relation to problem behavior is an over-all rating of the diseases and illnesses of children during the second year of life. A public health nurse visited the home at three-month intervals during the second year and recorded the child's height and weight, dentition, illnesses, diet, and regime. On the basis of this record, disease ratings were assigned by H. R. Stolz, M.D., according to the following scale which he devised:

> A rating of 5 was given to children who had suffered illnesses or physical handicap of such kind, frequency, severity, and duration as to justify the assumption that development was *markedly* modified thereby.
>
> A rating of 4 was given to children who had suffered illnesses or physical handicap of such kind, frequency, severity, and duration as to justify the assumption that development was *definitely* modified thereby.
>
> A rating of 3 was given to children who had suffered illnesses or physical handicap of such kind, frequency, severity, and duration as to justify the assumption that development was probably *slightly* modified thereby.
>
> A rating of 2 was given to children who had suffered illnesses or physical handicap of such kind, frequency, severity, and duration as to be considered *insignificant* in relation to development.
>
> A rating of 1 was given to children for whom no illness or physical handicap was reported.

Biserial r's between these second-year-disease ratings and the incidence of problem behavior were computed for two age levels, 21 months

TABLE 17

Relation of Second-year Disease Ratings to the Incidence of Problem Behavior

Behavior problems[a]	Age in years			
	1¾		3	
	Boys (r_{bis})	Girls (r_{bis})	Boys (r_{bis})	Girls (r_{bis})
Sleeping habits				
Disturbing dreams	.22	.07	.14	.10
Restlessness in sleep	.20	.28	−.03	.13
Elimination				
Diurnal enuresis	.02	.09	...	...
Nocturnal enuresis	.12	−.12	.03	.07
Soiling	−.12	.06	...	...
Eating habits				
Insufficient appetite	−.04	.63**	...	...
Food finickiness	.08	.23	−.05	.28
Sex				
Modesty	...	...	...	.05
Masturbation	.15	.49*	...	...
Motor habits				
Nailbiting	...	...	...	.26
Thumbsucking	−.05	.15	.10	.08
Hyperactivity	−.06	.34	.19	.34
Speech problems	.00	.27	.01	−.05
Asocial conduct				
Lying	...	...	.26	−.04
Stealing	...	...	−.10	.13
Destructiveness	.50*	...	.25	.17
Personality characteristics				
Overdependence	.44*	−.19	.06	.13
Excessive demanding of attention	.06	−.01	.25	.17
Oversensitiveness	.40	.02	.01	.10
Timidity	.02	.09	−.28	−.18
Specific fears	.14	.24	−.42*	−.27
Mood swings	.27	.02	.14	.19
Negativism	.00	−.23	.01	.13
Irritability	.49*	...	.32	...
Temper tantrums	−.05	.41*	.09	.01
Jealousy	.06	.14	.41*	.13
Number of cases	55	59	49	48

* Indicates correlations significant at the 5 per cent level.

** Indicates correlations significant at the 1 per cent level.

[a] Positive correlations indicate that the presence of the problem is associated with severe illness.

and 3 years. We should expect the second-year-disease ratings to be related to problem behavior at 21 months since the illnesses were occurring during the year described in the problem report. Handicapping illness in the second year was related to reports of the following problems at 21 months in boys: *destructiveness, irritability,* and *overdependence;* and in girls to *insufficient appetite, masturbation,* and *temper tantrums.* At the 3-year level, which is one year after the illness under consideration, we find a significant relationship in boys between the second-year illness and *jealousy* but a significantly negative relationship to *specific fears.* This means that boys who were ill during their second year of life are less likely than average to have *fears* at 3 years but more likely to be *jealous.* No significant relationships were observed among the girls but we notice that the highest correlation was between *hyper-* or *overactivity* in girls at 3 years and their second-year illness record, and, as with the boys, negative (but not significant) correlations were obtained between second-year-illness ratings and both *fears* and *timidity.* These relationships, some of which are statistically significant, suggest that the solicitude attendant to illness in the young child may be reassuring and make for less timid and fearful attitudes and that this fearlessness may persist for at least a year.

In summary, the results shown in tables 16 and 17 suggest that many of the problems reported by mothers are to some degree associated with poor physical health. *Irritability, tempers,* and *destructiveness* are the problems most consistently related to poor health. In boys, *overdependence* at 21 months is associated with severe illness; and *excessive attention demanding* to poor nutritional status at 21 months and 5 years. In girls, problems connected with *eating* are also related to poor physical condition, as are *somberness* and *excessive reserve.* Boys who are below par physically are more likely to *sleep poorly* at 3 years. Finally, we should like to mention again the interesting finding that children who have had more than their share of illness in the second year appear less timid and fearful a year later.

XII. PHYSIOLOGICAL MATURITY IN RELATION TO PROBLEM BEHAVIOR

AN EVALUATION of physiological maturity for the children in both the Control and Guidance groups showed that the average age of the boys at reaching the adult stage of external sex characteristics is 15.2 years, whereas for the girls the average age of menarche is 12.8 years (8). Since the collection of data on the personality and behavior characteristics of the children in the present study did not continue after 14 years, it has not been possible to evaluate the relation of puberal changes to behavior in boys but a preliminary analysis has been made for the girls.

Menarche occurred for one girl as early as 10½ years and for another as late as 16 years, but the majority of girls matured between the ages of 12 and 14 years. Since there is behavior data for only 34 girls at 13 years, comparisons of subgroups of early and late maturers can give only tentative findings. We compared the total number of problems of girls whose age at menarche was: 11.9 years or less (N = 7); 12 to 12.9 years (N= 21); 13 to 13.9 years (N = 11); and 14 years and later (N = 4). It was found that the peak in the total number of problems for the earliest maturing group occurred one year before menarche, at 10 years. And it was also observed that these early maturing girls had more problems on the average from 9 years on than did the other three groups. Girls maturing between 12 and 12.9 years had their peak in total number of problems at 11 years, which was also approximately one year before their age of menarche. The girls who matured at 13 years or later tended to have fewer problems at all ages, but there were no observable trends in relation to the ages at which they matured. These trends are based on so few cases that we should hesitate to report them if similar findings had not been reported for another group of California adolescents who were studied in a near-by city (4). In that study it was reported that the early maturing girls had more difficulties in adjustment than did the later maturing girls.

We have analyzed also the changes in the incidence of specific problems in relation to menarcheal age. The problem frequency at the age nearest menarche was compared with the problem frequencies one and two years before and after the age of menarche. Two problems which appear unrelated to age of menarche are *restlessness in sleep* and *excessive modesty*. There is a marked drop in the incidence of *disturbing* *dreams* after menarche. But the most interesting finding is the group of six problems which show an increase in incidence the year before menarche followed by a drop (varying from 3 to 18 per cent) at the age of menarche. This group of problems includes *excessive emotional dependence,* which shows this trend most clearly, and *shyness, fears, somberness, irritability,* and *excessive reserve.*

Individual girls varied markedly in their behavior reactions during pubescence. Some records indicate little or no relationship between physiological changes and behavior whereas in others, the relationship is clear. An extraordinary increase in the number of problems of one girl (Case 665) was reported by this girl's mother at 13 years, menarche occurring some three months after the mother's report. By 14 years this girl's problem total had dropped again below the average for the group.

TABLE 18

PERCENTAGE INCIDENCE OF PROBLEMS ACCORDING TO AGE OF MENARCHE

Behavior problems	2 years before menarche	1 year before menarche	Age of menarche	1 year after menarche	2 years after menarche
Sleep habits					
Disturbing dreams	39	30	30	21	9
Restlessness in sleep	12	15	18	9	0
Excessive modesty	15	24	18	22	18
Personality					
Emotional dependence	15	24	6	8	9
Shyness	18	33	21	22	45
Fears	24	30	15	30	18
Somberness	12	24	21	22	27
Irritability	3	12	9	4	9
Excessive reserve	45	36	33	43	36
Number of cases	33	33	33	23	11

In summary, the early maturing girls have more problems at all ages during pubescence with a peak at 10 years, which is the year before menarche; girls maturing between 12 and 12.9 years have fewer problems than the earliest maturers, and their peak in frequency is also a year before menarche at 11 years. The later maturers tend to have fewer problems at all ages, and show no trends in relation to menarche. Certain specific problems (*emotional dependence, shyness, fears, som-*

berness, and *irritability*) were found to increase in frequency a year before menarche and decrease at the age level nearest menarche. This finding suggests that there is an increase in tension in the year or so

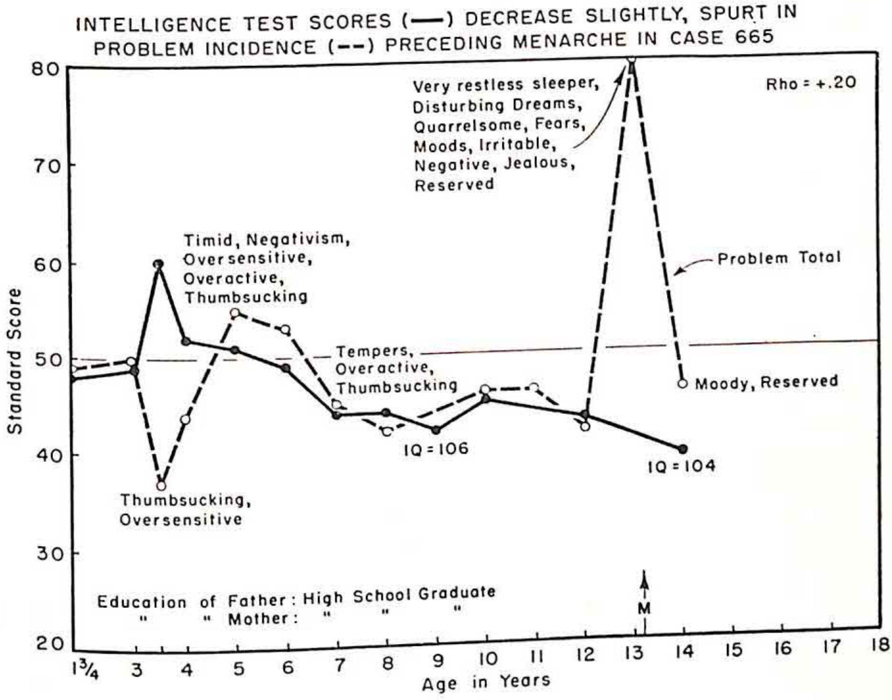


Fig. 59

preceding menarche. This tension may be due to the physiological changes, to social aspects of maturing, or more probably to both of these factors. Individual differences in behavior during pubescence are marked, according to the mothers' reports.

XIII. INTELLIGENCE IN RELATION TO PROBLEM BEHAVIOR

THE CHILDREN were given individual mental tests when they first came to the Institute at the age of 21 months. They were next tested at 3 years and then at 3½ years and thereafter on their yearly birthdates up to and including 10 years. Two further tests were administered at 12 and 14 years for half the group, and at 13 and 15 years for the second half. The mental tests used were the California Preschool Scales to 5 years, the Stanford-Binet at 6 and 7 years, and either Form L or M of the Revised Stanford from 8 to 15 years (3). The mental test scores have been correlated with the total number of problems at each age for boys and girls separately. These findings are presented in figure 60. The correlations are for the most part negative indicating that the children earning high mental test scores have fewer problems. Among the boys, the correlations between measured intelligence and total number of problems is positive at 21 months and 3 years, and thereafter becomes increasingly negative with the highest negative correlation occurring at 12 to 13 years (–.41). This coefficient approaches statistical significance at the 5 per cent level as does the cor-

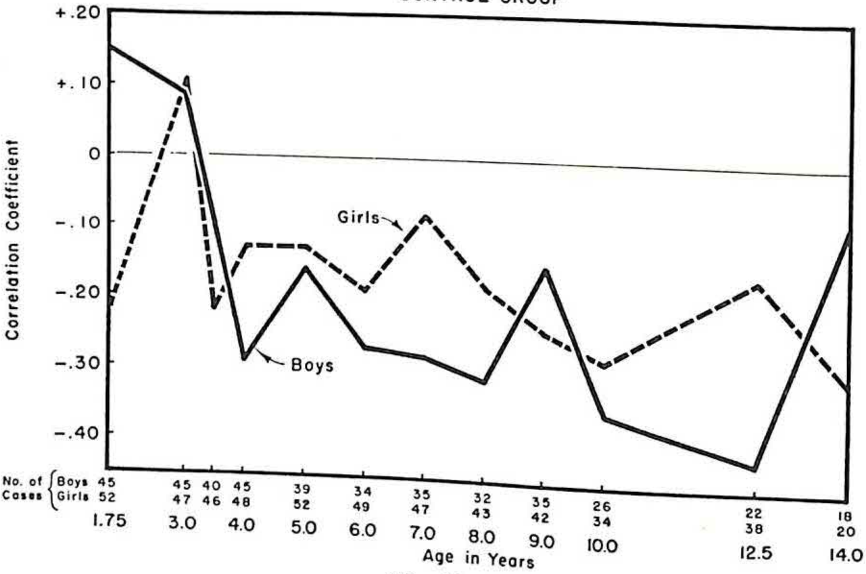


Fig. 60

TABLE 19

RELATION OF CHILDREN'S MENTAL TEST SCORES TO PROBLEM BEHAVIOR

Behavior problems[a]	Age in years					
	1¾		3		5	
	Boys (r_{bis})	Girls (r_{bis})	Boys (r_{bis})	Girls (r_{bis})	Boys (r)	Girls (r)
Sleeping habits						
Disturbing dreams	−.14	.25	.10	.50**	...	...
Restlessness in sleep	−.15	.22	−.34	.36	...	...
Elimination						
Diurnal enuresis	−.21	−.22	...	...	...	...
Nocturnal enuresis	.17	−.23	−.44**	−.24	...	...
Eating habits						
Insufficient appetite	...	...	...	...	.09	−.03
Food finickiness	−.36	.01	.10	−.08	...	...
Motor habits						
Nailbiting	...	...	...	...	.12	−.12
Thumbsucking	.08	−.08	.00	.05	−.20	.04
Hyperactivity	−.02	−.18	.13	.13	−.05	.10
Speech difficulties	−.50**	−.27	−.13	−.13	...	...
Asocial conduct						
Lying	...	...	.17	.58**	...	...
Stealing	...	...	...	...	.24	.44**
Destructiveness	−.44*	...	...	...	.30	.09
Personality characteristics						
Overdependence	−.23	...	−.17	−.62**	.29	.08
Excessive demanding of attention	−.28	−.08	−.01	−.05	−.02	.08
Oversensitiveness	...	...	...	...	−.08	−.09
Timidity	−.16	−.19	−.21	−.23	.22	−.02
Specific fears	.21	−.02	.19	−.18	.05	−.20
Mood swings	...	...	...	...	.22	.01
Somberness	...	...	...	...	.44**	−.13
Negativism	−.11	−.06	−.15	.01	.16	.00
Irritability	...	...	...	...	.38*	.02
Temper tantrums	−.52**	−.27	−.11	.04	.04	.05
Jealousy	−.30	−.27	−.17	−.22	.17	−.05
Excessive reserve	...	...	...	...	.36	−.13
Number in each group	57	56	49	48	39	52

* Indicates correlations significant at the 5 per cent level.

** Indicates correlations significant at the 1 per cent level.

[a] Positive correlations indicate that the children who have the problem have higher mental test scores on the average.

relation at 4 years. The trend for the girls is less clear, the correlations ranging from .11 at 3 years to –.30 at 14 or 15 years with no relationships statistically significant.

Table 19 presents the relation of the children's mental test scores to the presence of specific problems for age levels 21 months and 3 years, and to the severity of the problem codings at 5 years. At 21 months, *temper tantrums, speech difficulties,* and *destructiveness* are related to low mental test scores in boys. No significant relationships were found for the girls at this age. At 3 years, *nocturnal enuresis* is related to low intelligence in boys; but in girls, we find *disturbing dreams* and *lying* associated with high intelligence scores, and the only problem related to low intelligence is *overdependence.* At the 5-year level, problems associated with high intelligence in boys are *somberness* and *irritability;* and in girls, *stealing.*

These findings may be summarized as follows: A negative relation exists between the number of behavior difficulties and mental test scores after 3 years in both boys and girls. The specific problems which are related to low intelligence test performance in boys are suggestive of immaturity or lack of control, *tempers, speech problems,* and *destructiveness* at 21 months, and *nocturnal enuresis* at 3 years. In girls, the positive relationship between high mental test scores and *lying* and *disturbing dreams* suggests that it takes good verbal facility to report *dreams, lie,* and earn a high mental test score. At 5 years, the problem *somberness* is correlated with high intelligence in the boys suggesting overcontrol and an internalizing of tension. The fact that *irritability* is related to good mental test performance may simply be indicative of a reactive organism that appears irritable to his mother and tests high in intelligence.

The children's mental test scores were converted into standard scores based on the mean I.Q. of the group at each age level. Similarly, standard score equivalents to the total number of problems at each age were computed. These standard scores have been graphed according to age for individual children (figs. 61 to 64). Interesting individual differences were found, indicating that in some children there is concomitant variation and in others an inverse relation between changes in mental and problem status. The Rhos reported in the figures refer to rank order correlations computed between the two sets of standard scores for each child. The Rhos range in magnitude from –.81 to +.72.

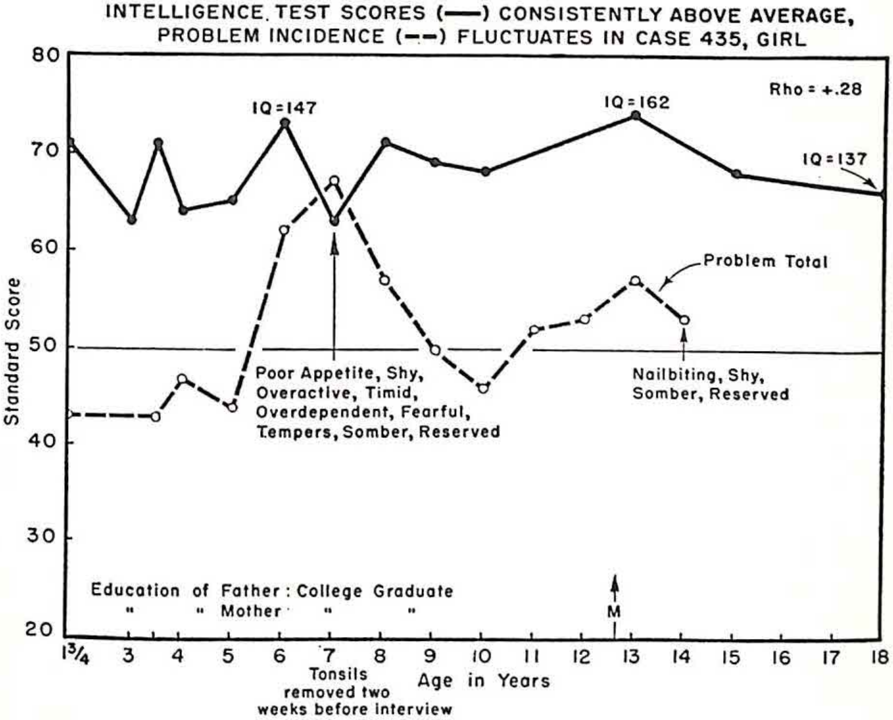
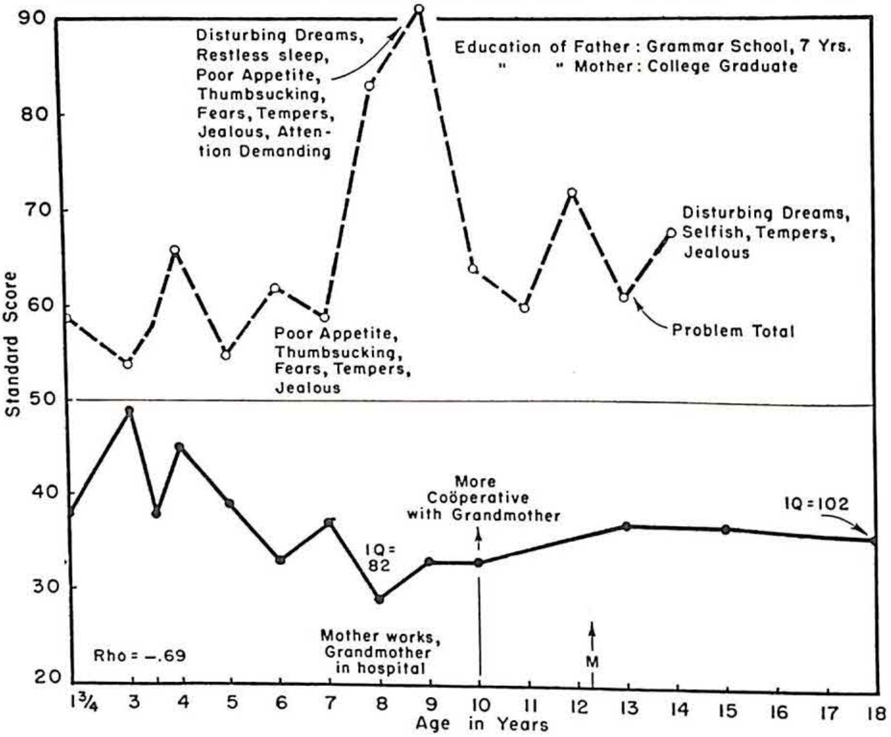


Fig. 61

Case 435 Whose Intelligence Test Scores Are Consistently Above Average and Whose Problem Scores Fluctuate

Case 435 is a girl who had relatively few problems except during the period following school entrance. This child earned high mental test scores with remarkable consistency, and it is of interest that the one dip in the mental test curve coincides with the period of greatest problem incidence at 7 years. This girl's tonsils were removed two weeks before the 7-year mental test and it is not, therefore, surprising that the mother should report her daughter having the following problems at that age level: *poor appetite, shyness, timidity, overdependence, fears, tempers, somberness,* and *excessive reserve.*



INTELLIGENCE TEST SCORES (—) CONSISTENTLY BELOW AVERAGE, MARKED FLUCTUATIONS IN PROBLEM INCIDENCE (--) IN CASE 320, GIRL

Fig. 62

Case 320 Whose Intelligence Test Scores Were Consistently Below Average and Whose Problem Scores Show Marked Fluctuations

Case 320's history is recorded in detail in chapter viii. This girl had more than the average number of problems at every age level, but the tremendous number she had at 8 and 9 years appears related to the absence from home of her one source of support, her grandmother who was in the hospital. Even a listing of some of the problems reported for this girl at 9 years suggests the extent of her distress and her reactive patterns to it: *disturbing dreams, restlessness in sleep, poor appetite, fears, tempers,* and *attention demanding*. Less than average "intelligence," as judged by her mental test performance, combined with emotional stress affected her school adjustment adversely and added one more factor to her insecurity.

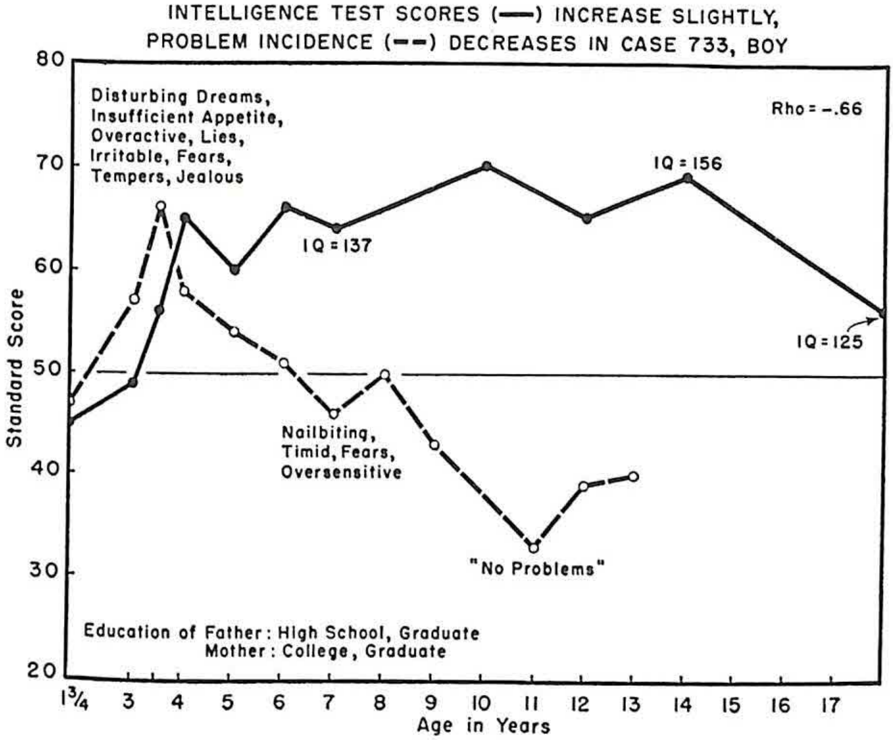


Fig. 63

Case 733 Whose Intelligence Test Scores Increase and Whose Problem Scores Decrease with Age

Case 733 gained steadily in intelligence test status between 21 months and 10 years. At 11 years, the boy's mother reported he had "no problems." The inverse relation of intelligence test scores and number of problems is indicated by the Rho of –.66. This boy had many problems at 3½ years which was his peak, and his problems at that age were varied: *disturbing dreams, insufficient appetite, overactivity, lying, irritability, fears, tempers,* and *jealousy.* It is interesting and instructive that this boy should have none of these difficulties by the time he was 11. One explanation for this change might lie in the boy's high intelligence (I.Q. = 156 at 15 years) and the approval he obtained both at home and at school for intellectual and academic achievement; but the next case suggests that "intelligence" does not always help children solve their problems.

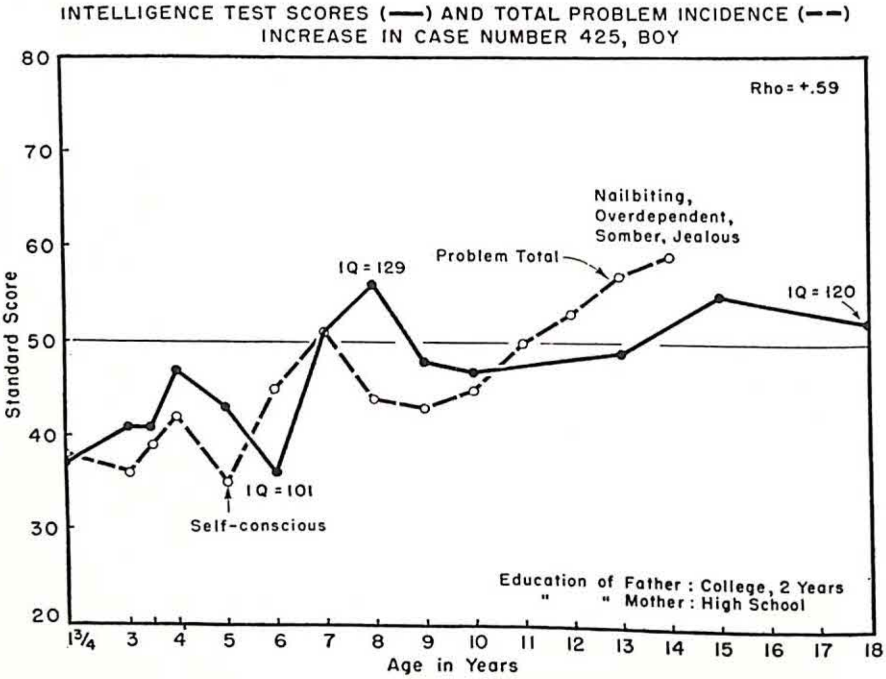

INTELLIGENCE TEST SCORES (——) AND TOTAL PROBLEM INCIDENCE (– –)
INCREASE IN CASE NUMBER 425, BOY

Fig. 64

Case 425 Whose Intelligence Test Scores and Problem Scores Increase with Age

This boy gained with age in intelligence test status as his problems increased. The concomitance of these scores is indicated by the Rho of +.59. It is conceivable that his relatively poor interpersonal relationship, as evidenced by his *overdependence, somberness,* and *jealousy,* forced more internalization and intellectualization which raised his I.Q. and gave some internal order and security to his life. There are a number of children in the intensive group like this boy for whom escape into intellectualization and achievement, although not solving interpersonal and social problems, at least offered one area of badly needed approval.

XIV. CHARACTERISTICS OF THE MOTHER IN RELATION TO THE CHILD'S BEHAVIOR

Certain personality characteristics of the mother were rated on a seven-point scale[7] by the psychologist who gave the children mental tests and who secured the information recorded on the behavior inventory. The children's ages when the ratings of the mother were made were 3½, 4, 5, and 6 years.

In order to estimate the reliability of these seven-point ratings, correlations were computed between the average of the ratings made when the children were aged 3 and 3½ with the average of those given at the 5- and 6-year age levels. These reliability coefficients range from .32 for the item *anxiety to make an impression* to .82 for *fluent use of language*. The median coefficient is .61. These correlation coefficients suggest sufficient reliability of the traits to warrant their being used in relation to the reports of the children's behavior. The average of the four ratings made at ages 3, 3½, 5 and 6 years was the value used in relation to the children's behavior.

Correlations between these average ratings of the mothers' personality characteristics and the severity of the children's problems were computed for the total group of 91 boys and girls at one age level only, 5 years.

Although our main interest is a consideration of parental characteristics which are related to each of the problems, we should like to consider also the over-all importance of certain of the mothers' personality characteristics in relation to the children's behavior. The characteristic of the mother which is significantly related to the largest number of problems is the item *self assurance* or *poise* (see table 20). All the correlations were negative so the relationships found may be worded as follows: The mother who is "painfully self-conscious and feels inferior" is likely to have children who are *overdependent* ($r = .33$), *excessively reserved* ($r = .33$), *destructive* ($r = .31$), have *mood swings* ($r = .24$), are *irritable*, and are *somber* ($r = .23$). Three of these problem behaviors are also negatively related to the ratings of the mother's intelligence (*destructiveness* ($r = -.33$), *mood swings* ($r = -.26$), and *irritability* ($r = -.22$)). *Talkativeness* and *cheerfulness* in the mothers have negative relationships to *somberness* and *reserve* in the child. The unhappy and silent mother, in other words, tends to

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[7] Scale of 33 items compiled by C. McC. Tryon to evaluate easily observable personality characteristics.

TABLE

Relation of Mothers' Personality Characteristics

Mothers' characteristics	Behavior						
	Insufficient appetite	Excessive modesty	Nailbiting	Thumbsucking	Hyperactivity	Stealing	Destructiveness
Intelligence	−.02	−.14	−.14	.08	−.13	−.16	−.33**
Mental alertness	−.05	−.12	.01	.17	−.01	−.09	−.20
Use of language	.04	.02	−.22*	.13	.04	−.08	−.17
Personal appearance	.09	−.17	−.12	.14	−.16	−.19	−.25*
Restlessness	−.06	.13	−.19	.03	.09	.08	−.02
Talkativeness	−.27**	.09	.00	.03	.04	−.01	−.10
Self-assurance. Poise	−.07	−.11	.06	.17	−.14	−.08	−.31**
Tendency to criticize child	.26*	.00	.20	−.07	−.02	.11	.12
Cheerfulness	−.03	−.14	.02	.12	−.01	−.08	−.12
Worry	−.06	.20	.00	−.05	.09	−.06	−.06
Coöperation in discussion of child	−.05	.03	.12	.09	.02	.03	−.18
Excitability	−.05	.05	−.03	.10	.01	.05	−.14
Interest in child	−.04	−.13	.17	.01	.17	−.05	−.13
Coöperation in study	.08	.02	−.03	.22*	−.04	−.12	−.23*
Anxiety to make impression	−.12	−.04	−.07	−.07	−.11	−.20	−.15
Pleasant facial expression	−.06	−.17	.04	.14	−.05	−.11	−.20
Attitude to child's eating habits	.33**	−.05	.18	.00	.16	.17	.19
Attitude to child's personality traits	.01	−.01	.14	−.15	.12	.01	.09
Attitude to child's sex behavior	−.14	−.01	.05	−.15	.07	.05	.16
Nagging or approval	−.09	.00	.04	−.05	.09	.10	−.02

* Indicates correlation significant at the 5 per cent level.
** Indicates correlation significant at the 1 per cent level.

TO PROBLEM BEHAVIOR IN 91 CHILDREN AT 5 YEARS

problem											
Overdependence	Timidity	Specific fears	Mood swings	Temper tantrums	Irritability	Negativism	Jealousy	Excessive demanding of attention	Oversensitiveness	Somberness	Excessive reserve
−.20	.04	−.08	−.26*	−.20	−.22*	−.13	−.13	−.07	.02	−.19	−.07
−.22*	.01	−.09	−.16	−.19	−.15	.00	.00	−.02	.00	−.23*	−.19
−.12	−.01	−.03	−.10	−.22*	−.27**	−.04	−.01	−.09	−.10	−.08	−.09
−.30**	−.13	−.07	−.18	−.13	−.22*	−.16	−.12	−.06	.03	−.12	−.14
−.13	−.04	−.12	−.07	−.16	−.20	−.10	.00	.08	.07	−.14	−.11
−.08	−.06	−.16	−.14	−.18	−.28**	−.01	−.12	.02	−.06	−.30**	−.27**
−.33**	−.12	.00	−.24*	−.09	−.23*	−.08	−.11	−.13	−.10	−.23*	−.33**
.11	.11	.13	.23*	.03	.19	.10	−.01	.03	.04	.23*	.15
−.21*	−.10	.02	−.18	−.08	−.08	−.08	.14	.00	−.15	−.39**	−.35**
.14	−.03	−.10	.01	−.10	.00	−.02	−.04	.10	.14	.20	.19
.07	−.04	−.10	.02	−.18	−.17	−.01	−.06	.09	−.17	−.18	−.21*
−.01	.03	−.08	−.09	−.12	−.19	−.07	−.04	.14	−.03	−.14	−.16
.04	.12	−.14	−.02	.03	.05	−.03	.01	.07	.09	−.04	−.15
−.03	.07	−.03	−.06	−.11	−.02	.00	−.01	.02	.04	−.09	−.09
−.13	−.07	−.19	−.18	−.14	−.21*	−.11	−.11	.12	−.05	−.11	−.12
−.15	.03	.04	−.13	−.09	−.06	.04	.04	.11	−.06	−.29*	−.22*
.06	−.01	.10	.12	.04	.28*	.13	.02	.09	−.19	−.03	−.01
.00	−.05	.10	.05	−.06	−.07	−.01	−.09	.03	.06	.00	−.03
−.05	−.08	.04	.06	−.10	.06	.07	−.03	.08	.06	.04	−.01
−.08	.06	.09	.06	−.07	.00	.02	.01	−.12	.09	.00	−.03

have inhibited and somber children. Characteristics of the mother which are *not* significantly related to *any* of these behavior problems are: *restlessness, worrisomeness, interest in child, excitability, concerned attitude toward the child's personality traits, nagging* or *approval,* and *disturbed attitude toward child's sex behavior.* These characteristics we certainly had expected to be related to problem behavior in the child.

We shall summarize briefly the personality characteristics of the mother which are related to a statistically significant degree to each of the behavior problems at age 5 listed in table 20.

Insufficient appetite.—As might be expected, the severity of the problem *insufficient appetite* at 5 years is related to an *anxious attitude* of the mother *toward the child's eating habits* ($r = .33$); mother's *tendency to criticize* her child ($r = .26$), and negatively to mother's *talkativeness* ($r = -.27$). These correlations need to be considered in conjunction with the child's state of health. In the correlations between *poor nutritional status* and *insufficient appetite* there is only one that is significant for ages 21 months, 3 years, and 5 years, namely, for girls at age 5 (–.37). The others are all low but negative. Only one is significant between *poor appetite* and *illness* for girls at 21 months ($r_{\mathrm{bis}} = .63$). These findings suggest that the mother who talks little but when she does, criticizes her child, is likely to overreport *poor appetite* when compared with the illness records and physician's reports on nutritional level.

Nailbiting.—At the 5-year level, *nailbiting* is negatively related to mother's *fluent use of language* ($r = -.22$). In other words, the mother with a halting, minimal vocabulary is likely to have a child who bites his nails. The relationship between the mother's *tendency to criticize her child* and the child's nailbiting approaches significance ($r = .20$).

Thumbsucking.—The severity of this problem at 5 years is significantly correlated with only one characteristic of the mother, *coöperation in the study* ($r = .22$), although mother's *poise and self-assurance* ($r = .17$) approaches significance. In the intensive group, *thumbsucking* was also found to be related to desirable family variables (5) and in this respect, this problem is different from all other problems.

Destructiveness.—In the 5-year-old child, *destructiveness* is significantly related to the following characteristics of the mother: *low intelligence* ($r = .33$), *lack of poise and self-assurance* ($r = .31$), *unattractive personal appearance* ($r = .25$), and *indifferent or uncoöperative attitude toward the study* ($r = .23$).

Excessive dependence.—This problem is significantly related to ratings of four of the characteristics of the mother: *lack of self-assurance and poise* ($r = .33$), *unattractive personal appearance* ($r = .30$), *lack of mental alertness* ($r = .22$), and *dejected, melancholy appearance* ($r = .21$).

Mood swings.—The mothers who reported that their 5-year-olds had mood swings had less than average *intelligence* ($r = -.26$), were *lacking in self-assurance* ($r = -.24$), and were *critical of their children* ($r = .23$). No wonder the children had this problem!

Temper tantrums.—The only maternal characteristic which is significantly correlated with the severity of this problem at 5 years is *poor use of language* (halting, ungrammatical, minimal vocabulary) ($r = -.22$). It is interesting that this lack of language clarity should be more highly correlated with *temper tantrums* than the rating of *mother's intelligence,* but it is understandable that a child could be more uncertain and confused by this characteristic in his mother and more prone to acting-out devices.

Irritability.—Seven of the twenty characteristics of the mother are significantly correlated with this problem: *talks very little* ($r = .28$), *overanxious attitude toward eating habits* ($r = .28$), *poor use of language* ($r = .27$), *lack of self-assurance and poise* ($r = .23$), *unattractive personal appearance* ($r = .22$), *less than average intelligence* ($r = .22$), and *no interest in making an impression* ($r = .21$). There may be some halo effect in these relationships since for the most part the evaluation of the personality characteristics of the mother was made by the interviewer who secured the material on the children's behavior. However, the mothers' ratings were made when the children's ages ranged from 3½ to 6 years and so to some extent predate the later reports of behavior.

Somberness and excessive reserve.—These are related to many of the same characteristics of the mothers. It is interesting to observe that the highest correlation in the entire table is between *somberness* in the child of 5 years and a mother with a *somber, uncheerful appearance* ($r = .39$). The correlation of this characteristic in the mother and excessive reserve in the child is .35. Other maternal attributes which are significantly related to the problems of *somberness* and *excessive reserve* are: mother *talks very little* ($r = .30$ with child's *somberness;* .27 with his *excessive reserve*); mother's *lack of self-assurance and poise* ($r = .23$ with child's *somberness* and .33 with *excessive reserve*); and mother's *unpleasant facial expression* (sad, blank, or cranky) ($r = .29$ with child's somberness; .22 with his *excessive reserve*).

Two characteristics which are related to *somberness* in the child but not to *excessive reserve* are: mother's *lack of mental alertness* ($r = .23$) and mother's *tendency to criticize child* ($r = .23$). The one characteristic in the mother which is significantly correlated with *excessive reserve* in the child but not *somberness* is *mother uncoöperative in discussing child* ($r = .21$).

There are nine problems which are not related to a significant degree to any of the mother's personality characteristics rated in the study. These problems are *excessive modesty, overactivity, stealing, timidity, specific fears, negativism, jealousy, excessive demanding of attention,* and *oversensitiveness.*

The relationships reported in this chapter are highly suggestive of those attitudes and attributes of the mother which are important in relation to the young child's behavior. The importance of the mother's self-assurance or poise, or their lack, is a significant finding. Her feelings of inadequacy and insecurity produce similar behavior in her child (*excessive dependence*), and either overt *irritability* or *excessive reserve* or both (*mood swings*). This finding supports the conviction of the clinic staff that major benefits accrued to young children when the mothers were helped to be more understanding and at ease with themselves so that they were freer to handle wisely the rearing of their children. Another finding of interest is the importance of the mother's *use of language* and *talkativeness* in relation to problem behavior. This finding supports the teachings of nursery school workers as to the importance of clear and helpful communication from adults to preschool children. The mother's skill in communicating to her child is an important aspect of the educative process, and contributes to healthy emotional development as well as to the acquisition of information.

XV. SUMMARY AND FINAL COMMENTS

THE MAJOR objective of this report has been to present materials on the frequencies of certain behaviors labeled "problems," found in a sample of fairly representative children. We felt when we began the study that there had been gross overgeneralization from highly selected samples of "problem children" and believed that facts on a sample of children selected on a nonproblem basis would, in conjunction with the findings of selected-for-problems samples, give a more balanced picture and reduce current overgeneralization. A more basic objective, but one subsidiary to the main object of this report, has been to sharpen personality development theory. Our larger undertaking is committed to this end, but we hope that even this report will raise questions about some aspects of contemporary personality development theory.

The sample used as the basis of this report is the control or uncontaminated group of our larger study. It was selected as being more representative than the group in which intervention had occurred. With respect to its representativeness, the following facts should be stated. It is a subsample of every third child born in Berkeley, California, during an eighteen-month period from January 1, 1928 through June 30, 1929. At the beginning of the study, before sample shrinkage during fourteen years, it represented families of somewhat higher education and, being young families, somewhat lower per capita income than the population at large. By age 14, the last year used in this report, more of the lower socioeconomic level had dropped out so the sample becomes more biased toward the high-middle socioeconomic-educational level. The size of the group studied also presents limits to generalizability, especially in the later years, although limitations are not so great as if these were completely different cross-section samples. The fact is that for the percentage frequency figures, other fairly representative samples would unquestionably vary somewhat from these, but these figures are a much needed beginning on the long road of filling a major gap of empirical fact with respect to nonpathological groups.

The method was that of simple, open-ended inventory questioning of mothers. The data, therefore, are exclusively from mothers' reports which depend upon what they were able to observe and willing to report. One of the important results of this study is that from this non-going-beneath-the-surface method, significant facts were secured as determined by a number of criteria. This makes for greater accessibility of much needed data on a larger sample than ours so that greater generalizability is possible.

The methods of data organization were based upon the development of empirically derived scales of descriptive continua which permitted the securing of changing distributions of behavior over time, so that ages could be compared in degree and frequency of specified behaviors. Problem and nonproblem categorization was obtained by the establishment of sensible (we hope) but arbitrary cutoff points on these continua.

Our findings will be very briefly summarized. Problem frequencies were of five varieties: (a) problems which declined with age; (b) problems which increased with age; (c) problems which reached a peak and subsided; (d) problems which showed high frequencies, early declined, and later rose again; and (e) problems which showed little or no relationship to age.

(a) Among the problems which declined in frequency with age there were differences in the age at which, and the rate at which, these declinations occurred. Also the declinations on many problems varied with sex and sib order (first- and non-first-born). Among early and rapid drops in frequency were the problems associated with *elimination* controls. *Speech problems, fears,* and *thumbsucking* started their declines somewhat later. At still a later age, and at a slower rate, a decline occurred in *overactivity* and such explosive behaviors as *destructiveness* and *tempers.* Especially with the boys the decline in *tempers* was gradual, a third of them still having temper explosions at year 13.

(b) Only one problem increased systematically with age, namely, *nailbiting,* which had reached its peak and had begun to subside at the end of pubescence in girls and, unquestionably, would have declined for boys had our data extended beyond 14 years.

(c) Problems which reached a peak and subsided had among them *insufficient appetite* associated with the high level of communicable disease, and *lying,* which was tried out as a coping device and then given up for other more effective methods, or occurred in a form less detectable by mothers.

(d) The fourth grouping, which was characteristic of many personality problems, showed two peak elevations of frequency. Often these were at the preschool level and again at late pubescence; such were *restless sleep, disturbing dreams, physical timidity, irritability,* and *attention demanding.* Often the first peak occurred at the age of entering school and at the beginning of adolescence; such were *overdependence, somberness,* and *jealousy,* and in boys, *food finickiness.*

(e) A problem which showed little or no relationship to age after it was once established, was *oversensitiveness,* which, for the girls, stayed up throughout the age period studied; and which, for the boys, flourished until social pressures to "be a man" saw this behavior dramatically drop after age 11. In the section dealing with specific problem patterns, we discussed *oversensitiveness* in detail as one of the most successful coping devices the child evolved in his dealings with parents.

With respect to sib order (first- and non-first-born) substantial differences were found. The first-born boys showed more withdrawing and internalizing patterns, the non-firsts more overt, aggressive, and competitive patterns. The second-born girl exceeded first-born girls in only two respects, *thumbsucking* and *oversensitiveness.* When the first-born were girls, life appeared more difficult than for the other three groups. They showed more problems and more incompatible combinations of both aggression and withdrawing behavior. We speculated about the possible explanation for these differences, but the fact emerges that personality research needs much more detailed investigation into the situational factors and combinations of factors including interpersonal relations, same sex and cross-sex expectancies, and child-training processes, disruptions and changes in personal relationships, if we are to point up the important factors in personality development which these simple sib order findings have thrown into relief.

Predictive significance as measured by interage correlations reveals several facts of interest. One is how nonpersistent for a long age span most problems are. Even for adjacent age levels, no correlation is higher than .86, which indicates shifts even for short periods. The most predictive for the 5- to 14-, or 7- to 14-year periods were: *overdependence, somberness,* and *irritability.* It is of interest that considerably higher interage correlations were found for longer periods, for example between 6 and 11 years and 7 and 14, than between shorter periods such as 8 and 11 and 9 and 12, on several personality variables. We interpreted this to mean that events internal and external had caused children to shift around 11 and 12, later to return to more characteristic patterns. These findings are of interest since they are in contrast to our interage correlations for I.Q. where the greater the distance between ages, the lower the correlations.

We have analyzed the interrelationships among problems at two year levels only, namely, 5 and 12 on fourteen problems. It was found that certain problems had more significant behavioral correlates than did others. *Irritability* (a reactivity variable) led in number of correlates, closely followed by *overdependence, moodiness, negativism, somberness,* and *reserve.* Further, many more significant correlates occurred at year 5 for girls than for boys, whereas the reverse was true at 12 when, for the same fourteen problems, boys led substantially in the number of significant correlates. This permitted us the statement that tensional ages for boys and girls apparently vary and led us to speculate about the differential cultural pressures upon boys and girls with respect to age demands for inhibition of certain overt patterns of reaction or expression, which in turn is associated in the two sexes with different age periods of tension while internalization is being learned. All this may be related to biological differences that make possible the earlier establishment of overt conformity patterns in girls.

The other findings relating to problems of health, nutritional, and maturational status, I.Q., and I.Q. variability, and to characteristics of the mothers are too fragmentary and too unsystematically covered in this report to summarize. Even these fragmentary data seemed worth including if for no other reason than to point out the multifactor nature of personality and behavior dynamics, and to emphasize the necessity of avoiding overgeneralization at the present state of our limited knowledge, and of avoiding premature theoretical closure until, from more samples of growing children, a representative sample of biosocial facts is available and integrated.

It seems to us that more (and perhaps better conceived and executed) longitudinal studies than this pioneering attempt are essential if we really are to understand the relationships of early experiences and behavior to later behavior and personality and the processes by which stable personality patterns are achieved, and to understand the critical combinations of biosocial facts throughout the developmental period which disrupt or facilitate the progression to effective maturity.

EPILOGUE

May we pay our respects to the adaptive capacity of the human organism, born in a very unfinished and singularly dependent state into a highly complex and not too sensible world. Unless handicapped by inadequate structure and health and impossible and capricious learning situations, he threads his way to some measure of stable and characteristic patterning. We see, even in the raw frequency figures presented in this report, the variety of coping devices he uses for his complex set of tasks. He starts out with overt expression of his needs and feelings and attempts immediate and direct solutions to his problems. Many of his overt and direct problem-solving attempts are not tolerated, so he learns when necessary to side-step, to evade, to withdraw, to get hurt feelings and, also, to submit overtly even while his releases and problem-solving continues internally until controls are established. If he is under fairly stable and not too discontinuous pressures and secures enough approval and support to continue his learning and enough freedom to work out his own compromise overt-covert solutions, he becomes, to use the vernacular, "socialized," and even without this optimum combination, he frequently arrives at stable maturity. When we look at the hazards of the course, we are not sure that we have begun to understand how or why.

We can think of no better way to end this long report than to quote from a very poorly designed and inadequately written master's thesis which ended triumphantly with the following statement: "This thesis can be regarded as successful as it will be stimulating to further research in others, since it leaves so many questions unanswered."

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